

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

試験番号：0328

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APPENDIX A 1

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

STUDY NO. : 0328
 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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	2	12	18	19	20	20	20	21
	2000 ppm	0	0	0	0	15	15	15	18	22	28	28	30	30	33
PILOERECTON	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	24	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
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
	320 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	21	21	21	22	22	24	24	26	30	30	30	29	29	30
	2000 ppm	33	33	33	33	33	44	44	45	50	50	50	50	50	50
PILORECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	0	0	0	2	2	2	2	2	2	2	2	2	2
	800 ppm	32	32	32	32	32	32	32	32	32	32	32	32	32	32
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
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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	1	1	1	1
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	800 ppm	34	34	33	35	38	38	38	38	38	38	37	37	38	38
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
PILOERECTIO	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
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													
		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
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	2	2	2	2	2	2	2	2	2	3	3	3	3	3
	800 ppm	38	38	38	43	42	42	42	41	41	41	41	41	41	41
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	49	49
PILORECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
 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													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
DEATH	Control	1	1	1	1	2	2	2	2	2	2	2	2	2	3
	320 ppm	1	1	1	1	1	1	1	1	1	2	2	3	3	3
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	2	2	2	2
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	1	1	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	800 ppm	41	43	43	44	44	44	44	43	43	43	44	44	44	44
	2000 ppm	49	49	49	49	49	49	49	49	49	49	48	48	48	48
PILOBRECTION	Control	0	0	0	0	0	0	1	1	1	1	0	0	1	0
	320 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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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	4	4	4	4	4	5	5	5	5
	320 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	800 ppm	1	1	1	1	1	1	1	2	2	2	2	2	2	3
	2000 ppm	2	2	2	2	2	3	3	5	6	6	6	6	6	6
MORIBUND SACRIFICE	Control	1	1	1	1	1	1	2	2	3	3	3	3	3	3
	320 ppm	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	1	1	1	1	0	0	1	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	3	3	3	3	4	4	4	4	4	3	3	3	4	4
	800 ppm	45	45	45	45	45	45	45	44	44	44	44	44	44	42
	2000 ppm	48	48	48	48	48	47	47	45	44	44	44	44	44	44
PILOBRECTION	Control	1	1	1	1	1	0	1	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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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	6	7	7
	320 ppm	3	4	4	4	4	4
	800 ppm	3	3	3	3	5	6
	2000 ppm	6	6	6	6	8	11
MORIBUND SACRIFICE	Control	3	3	3	3	3	3
	320 ppm	2	2	2	2	2	2
	800 ppm	2	2	2	3	3	3
	2000 ppm	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0
	320 ppm	0	0	0	1	1	1
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	1
	320 ppm	1	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	1
	800 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1
COLORED	Control	0	0	0	0	0	0
	320 ppm	4	4	4	4	4	4
	800 ppm	42	42	42	41	41	40
	2000 ppm	44	44	44	44	42	39
PILOBRECTION	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	1
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

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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
TRAUMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
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
TRAUMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	2	2	2
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	2000 ppm	2	2	3	3	3	3	3	3	3	3	3	3	3	3
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	2000 ppm	0	0	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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

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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
TRAUMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	3	3	3	3	4	4	4	4	4	4	4	4	4	4
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	1	1	1	1	2	2	2	2	2	2	2	2	2	2
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
ANIMAL : RAT F944/DuCrj
REPORT TYPE : A1 104

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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
TRAUMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	0	0	0	2	2	2	2	2	2	2	2	2	2	2
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	4	4	4	4	4	4	4	5	5	5	5	5	5	5
CATARACT	Control	0	0	0	2	2	2	2	2	2	2	2	2	2	2
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	2	2	2	2	2	2	2	3	3	3	3	3	3	3
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
TRAUMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2	2	2	3	3	3	3	3	3
	2000 ppm	5	5	5	5	6	6	6	6	7	7	7	7	7	7
CATARACT	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2	2	2	3	3	3	3	3	3
	2000 ppm	3	3	3	3	4	4	4	5	6	6	6	6	6	6
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	2	1	1	1	1	1	1	1
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
TRAUMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	2	2	2	2	2	2	2	2	2	2	3	3	3	4
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	3	3	3	3	3	3	3	3	3	3	4	4	4	4
	2000 ppm	7	8	8	8	8	8	8	8	8	8	8	8	8	8
CATARACT	Control	2	2	2	2	2	2	2	2	2	2	3	3	3	4
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	3	3	3	3	3	3	3	3	3	3	4	4	4	4
	2000 ppm	6	7	7	7	7	7	7	7	7	7	7	7	7	7
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANTERIOS CHAMBER OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	0	0	0	0	0	0	0	0
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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
TRAUMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	4	4	4	4	4	4	4	4	4	4	3	3	3	3
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	2000 ppm	8	8	8	8	8	9	9	9	9	9	9	9	9	9
CATARACT	Control	4	4	4	4	4	4	4	4	4	4	3	3	3	3
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	2000 ppm	7	7	7	7	7	8	9	9	9	9	9	9	9	9
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANTERIOS CHAMBER OPACITY	Control	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
TRAUMA	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0
	320 ppm	1	0	0	0	0	1
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	1
EYE OPACITY	Control	3	3	3	3	3	3
	320 ppm	0	1	1	1	1	1
	800 ppm	4	4	4	4	4	4
	2000 ppm	9	9	9	9	9	7
CATARACT	Control	3	3	3	3	3	3
	320 ppm	0	1	1	1	1	1
	800 ppm	4	4	4	4	4	4
	2000 ppm	9	9	9	9	9	7
CORNEAL OPACITY	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
EXTERNAL MASS	Control	0	0	0	0	0	1	0	0	0	1	0	0	0	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	1	0	1	0	0	0
	2000 ppm	1	1	1	1	0	0	0	0	1	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	1	0	1	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	1	0	0	0	1	0	0	0	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
EXTERNAL MASS	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	1	1	1	0	0	0	2	2	2	1	3	1	1
	800 ppm	0	0	0	0	1	1	1	0	0	1	1	1	1	3
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	2	1	2
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	1	1	1	0	0	0	2	2	1	0	2	0	0
	800 ppm	0	0	0	0	1	1	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
EXTERNAL MASS	Control	0	0	0	0	0	0	1	1	1	2	1	1	1	1
	320 ppm	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	800 ppm	3	3	3	3	4	3	3	4	4	4	5	6	8	7
	2000 ppm	2	3	3	3	4	4	5	4	4	4	5	4	3	5
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0	1	1	1	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1	1	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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
EXTERNAL MASS	Control	1	1	2	2	4	3	4	4	4	5	4	5	4	5
	320 ppm	4	4	6	5	6	5	4	4	4	4	4	5	5	5
	800 ppm	8	6	6	6	6	6	4	4	5	5	5	5	5	5
	2000 ppm	5	4	4	4	4	4	3	3	4	5	5	5	9	9
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	2	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	2	2
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	1	1	1	1	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	320 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
EXTERNAL MASS	Control	5	6	6	6	6	6	8	8	9	8	7	8	8	9
	320 ppm	5	6	6	7	7	7	7	8	8	9	9	10	11	10
	800 ppm	5	5	5	7	7	8	9	10	9	8	8	8	8	7
	2000 ppm	9	9	10	13	13	11	10	10	11	11	11	11	11	12
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	2	2	2	2	2	1	2	2	3	3	4	4	3
	800 ppm	0	0	0	0	0	1	0	1	1	0	0	0	0	0
	2000 ppm	0	0	1	2	2	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	3	3	3	3	3	3	3	3	3	3	3
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	2	2	2	2	2	2
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
M. BREAST	Control	1	1	1	1	1	1	2	2	2	2	2	2	2	2
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	1	1	1	2	2	2	2	2	2	2	2	2	2	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
EXTERNAL MASS	Control	10	10	9	9	7	9
	320 ppm	11	12	12	14	14	14
	800 ppm	7	8	8	8	8	10
	2000 ppm	12	13	15	15	16	16
INTERNAL MASS	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	2
	800 ppm	0	0	0	0	0	1
	2000 ppm	2	2	2	2	2	2
M. PERI MOUTH	Control	0	0	0	0	0	0
	320 ppm	3	3	3	3	2	1
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1
M. ORAL CAVITY	Control	1	1	1	1	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	3	3	3	3	2	2
M. PERI EAR	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	2	3	4	4	4	3
M. NECK	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. BREAST	Control	2	2	3	3	3	3
	320 ppm	1	2	2	2	2	2
	800 ppm	1	1	1	1	0	0
	2000 ppm	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
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. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

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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. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	2	1	1
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

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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
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	2	2	2	2	2	2	2	2	2	3	2	1	1
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	3	2	2	3	3	3	4	4	6	6
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	3
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1

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ANIMAL : RAT F344/DuCrj
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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
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
M. ANTERIOR. DORSUM	Control	0	0	0	0	1	1	2	2	2	2	2	2	2	2
	320 ppm	0	0	0	0	0	0	0	0	1	1	1	2	2	2
	800 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	3	3
M. TAIL	Control	1	1	2	2	3	2	1	1	1	1	0	0	0	0
	320 ppm	1	1	2	1	2	2	1	1	0	0	0	0	0	0
	800 ppm	7	5	5	5	5	5	3	3	3	3	3	3	3	3
	2000 ppm	3	2	2	2	2	2	1	1	1	2	2	2	2	2
ANEMIA	Control	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	320 ppm	1	1	1	1	1	1	2	3	2	2	2	1	1	1
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	1	1	1	1	1	1	1	1	1	1	2	2	2	2

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ANIMAL : RAT F344/DuCrJ
REPORT TYPE : A1 104

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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. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	2	2	2	2	2	2	2	1	1	1	1	1	1	1
	320 ppm	2	2	2	2	2	2	3	3	3	3	3	3	4	4
	800 ppm	1	1	1	1	1	1	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	1	1	1	1	1	2	2	2	2	2	2
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	1	2	2	2	1	1	1	1
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	1	1	1	1	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	1	2	2	2	2	2	2	2	2	3	3	3	3	3
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	3	3	3	3	3	3	3	2	2	2	2	2	2	2
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	320 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	3	3	2	2	2	2	2	2	1	1	1	1	1	2
	2000 ppm	2	2	2	2	2	2	2	2	1	1	1	1	1	2
ANEMIA	Control	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	320 ppm	0	1	1	1	1	1	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	1	1	1	1	1	1	1	0	0	0	1
CRUSTA	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	5
	320 ppm	1	1	2	3	3	3	3	3	3	3	3	3	3	8
	800 ppm	2	2	4	4	4	4	4	4	7	7	7	7	8	9
	2000 ppm	2	2	3	3	3	3	3	3	4	4	4	4	4	5

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 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
M. ABDOMEN	Control	1	1	1	1	1	1
	320 ppm	0	0	0	1	1	1
	800 ppm	1	2	2	2	2	2
	2000 ppm	0	0	1	1	1	1
M. ANTERIOR. DORSUM	Control	1	1	1	1	1	2
	320 ppm	4	4	4	5	5	5
	800 ppm	2	2	3	3	3	4
	2000 ppm	2	2	1	1	2	2
M. POSTERIOR DORSUM	Control	1	1	0	0	0	0
	320 ppm	1	1	2	2	2	2
	800 ppm	2	2	2	2	2	2
	2000 ppm	1	1	1	1	1	1
M. HINDLIMB	Control	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. GENITALIA	Control	3	3	3	3	2	2
	320 ppm	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	3
M. TAIL	Control	1	1	1	1	1	2
	320 ppm	1	1	1	1	1	1
	800 ppm	2	2	2	2	2	2
	2000 ppm	2	2	2	2	2	2
ANEMIA	Control	1	1	1	2	1	1
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	1
	2000 ppm	1	1	1	1	1	1
CRUSTA	Control	5	5	5	5	5	5
	320 ppm	9	9	9	9	9	13
	800 ppm	9	9	9	9	9	9
	2000 ppm	5	5	5	5	5	5

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ANIMAL : RAT F944/DuCrj
REPORT TYPE : A1 104

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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
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL TESTIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	45	46	39	46	46	48	50	50	50	50	50	50	50
	800 ppm	37	49	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	42	49	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	24	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration		Week-day											
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL TESTIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	50	50	50	50	50	50	50	50	49	49	49	49	49	49
	800 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL TESTIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	800 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL TESTIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	800 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	0	0
ABNORMAL TESTIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	800 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	49
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	49	49
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL TESTIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	800 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	2000 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
	320 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	800 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	320 ppm	49	49	49	49	49	49	49	48	48	47	47	46	46	46
	800 ppm	49	49	49	49	49	49	49	48	48	48	48	48	48	48
	2000 ppm	49	49	49	49	49	49	49	49	49	49	48	48	48	48
SMALL STOOL	Control	0	0	0	0	1	0	1	1	1	1	0	1	1	0
	320 ppm	0	0	0	0	0	0	1	1	1	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	1	0	0	0	0	1	0	0	1	0
	320 ppm	0	0	0	0	0	0	2	1	1	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	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
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	1	1	1	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
ABNORMAL TESTIS	Control	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	1	1	1	1	0	0	0	0	0	1	0
	2000 ppm	0	0	0	2	2	1	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	1	1	1	1	0	0	0	0	0	1	0
	2000 ppm	0	0	0	2	2	1	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	1	1	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
	320 ppm	46	46	46	46	46	46	46	46	46	45	45	45	45	45
	800 ppm	48	48	48	48	48	48	48	47	47	47	47	47	47	45
	2000 ppm	48	48	48	48	48	47	47	45	44	44	44	44	44	44
SMALL STOOL	Control	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	1	0	1	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	2000 ppm	0	0	0	2	2	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
HEMORRHAGE	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	0
ABNORMAL TESTIS	Control	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	1
IRREGULAR BREATHING	Control	0	0	0	0	0	0
	320 ppm	0	0	1	1	1	1
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	1	1	1	1
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0
	320 ppm	0	0	1	1	1	1
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	1	1	1	1
DEEP BREATHING	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0
	320 ppm	45	44	44	44	44	44
	800 ppm	45	45	45	44	42	41
	2000 ppm	44	44	44	44	42	39
SMALL STOOL	Control	0	0	0	1	0	0
	320 ppm	0	0	0	1	1	1
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	1	1	0
	320 ppm	1	0	1	1	1	2
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

APPENDIX A 2

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

STUDY NO. : 0328
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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	2	2	3	3	4	4	4	4
	800 ppm	0	0	5	6	6	6	11	12	13	13	13	14	14	14
	2000 ppm	0	0	22	23	26	28	29	30	31	32	32	32	32	35

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	4	4	4	4	4	4	4	4	4	4	4	4	6	6
	800 ppm	14	14	15	15	15	16	15	16	16	16	18	18	21	21
	2000 ppm	36	36	39	41	41	41	38	42	42	42	43	43	45	45

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 43

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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	6	6	6	6	7	7	7	7	7	8	8	8	8	8
	800 ppm	21	21	21	21	21	22	23	24	24	24	25	25	25	25
	2000 ppm	46	46	46	46	46	46	46	47	46	47	47	47	47	47

STUDY NO. : 0328
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													
		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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	8	8	8	8	8	10	10	11	11	12	12	12	13	13
	800 ppm	25	27	27	27	27	27	27	26	26	27	28	28	28	28
	2000 ppm	47	47	47	47	47	47	47	48	48	48	48	48	48	48

STUDY NO. : 0328
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													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
DEATH	Control	0	0	0	0	0	0	0	1	2	2	2	2	2	2
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	2000 ppm	0	0	0	1	1	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
	320 ppm	0	0	0	0	1	1	1	3	3	3	3	3	3	3
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	13	13	12	12	12	12	12	12	11	11	11	11	11	11
	800 ppm	28	28	28	27	27	27	27	27	27	27	27	27	27	27
	2000 ppm	48	48	49	48	49	49	49	49	49	49	49	49	49	49

STUDY NO. : 0328
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													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
DEATH	Control	2	2	2	2	2	2	2	2	2	2	2	3	3	3
	320 ppm	0	0	0	0	0	0	0	0	0	1	1	1	2	2
	800 ppm	1	1	1	2	2	2	2	3	3	3	3	3	4	4
	2000 ppm	1	1	1	1	1	1	1	1	2	2	3	3	3	3
MORIBUND SACRIFICE	Control	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	800 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	2
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	2	2	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	11	10	10	10	11	11	11	13	13	13	13	14	14	14
	800 ppm	27	27	27	26	26	26	26	26	26	26	26	24	23	23
	2000 ppm	49	49	49	49	49	49	49	49	48	48	47	46	46	45

STUDY NO. : 0328
ANIMAL : RAT F944/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

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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	5	5	5	5	5	5
	320 ppm	2	2	2	2	2	4	4	4	5	6	6	6	6	6
	800 ppm	4	4	4	4	6	6	7	7	8	8	8	8	8	10
	2000 ppm	3	3	3	3	3	4	5	7	7	8	9	9	10	10
MORIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	320 ppm	3	3	3	3	3	3	3	3	3	3	4	5	5	6
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	2	3	3	3	3	3	3
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	14	15	15	15	15	14	14	14	14	15	15	14	14	14
	800 ppm	23	23	23	22	22	22	21	21	21	23	23	23	23	23
	2000 ppm	45	45	45	44	44	43	42	40	39	38	37	37	36	36

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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	6	6	7	9	9	9
	320 ppm	7	7	7	7	8	9
	800 ppm	10	10	10	10	10	10
	2000 ppm	10	12	12	12	13	13
MORIBUND SACRIFICE	Control	2	2	2	2	3	3
	320 ppm	6	6	6	6	6	6
	800 ppm	1	1	1	1	1	1
	2000 ppm	3	3	3	3	3	3
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	1	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	1	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	1
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0
WASTING	Control	0	1	1	1	2	1
	320 ppm	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0
	320 ppm	13	13	13	13	13	13
	800 ppm	23	23	23	23	23	23
	2000 ppm	36	34	34	34	33	33

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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
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	1	1	1	1	1	1	1	2	2	2	2	2
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	1	1	1	2	2	2	2	2	2	2	2
	2000 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	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	1	1	1	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
PILOERECTON	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	2	2	2	3	3	3	3	3	3	3	3	4	4	4
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	1	1	1	2	2	2	2	2	2	2	2	3	3	3
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	18	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	4	4	5	5	5	6	6	6	6	6	6	6	6	6
	320 ppm	1	1	1	1	1	2	2	2	1	1	1	1	1	1
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	3	3	4	4	4	5	5	5	5	5	5	5	5	5
	320 ppm	1	1	1	1	1	2	2	2	1	1	1	1	1	1
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
PILOERECTON	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	2	2	2	2	3	3	3
	2000 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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	1	1	1	1	1	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	320 ppm	1	1	1	1	2	3	3	3	3	3	3	3	3	3
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	3	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	320 ppm	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	3	3	3	3	3	3	2	2	2	2	2	2	2	2
	2000 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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	1	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
EYE OPACITY	Control	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	320 ppm	3	3	3	3	3	3	3	3	2	2	2	2	2	2
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	5	5	5	5	5	5	5	5	5	5	5	5	5	6
	320 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	800 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
PILOBRECTION	Control	0	0	0	0	1	2
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	1	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	1
	800 ppm	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
EYE OPACITY	Control	6	6	6	6	6	6
	320 ppm	1	2	2	3	3	3
	800 ppm	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0
CATARACT	Control	6	6	6	6	6	6
	320 ppm	1	2	2	3	3	3
	800 ppm	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
CORNEAL OPACITY	Control	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	1	1	1	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	1	1	1	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
CORNEAL OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	1	0	0	0	0	0	0	0	1	1	1	0	0	0
	320 ppm	0	0	0	0	1	1	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	1	1	1	1	1	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1	0	0	1	1	1	1	1	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	1	0	0	0	0	0	0	0	1	1	1	0	0	0
	320 ppm	0	0	0	0	1	1	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	1	1	1	1	1	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1	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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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
CORNEAL OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	1	1	1	1	1	1	1	1	1	2	2
	320 ppm	0	0	0	0	0	0	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
CORNEAL OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	2	2	2	2	3	3	3	2	2	2	2	2	2	2
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	1	1	1	1	2	1	1	2	2	2	1	1	1
	2000 ppm	2	2	2	1	1	1	1	2	2	2	2	2	2	2
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
CORNEAL OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	2000 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	1	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	1	1	1	1	1	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	2	2	2	2	2	2	2	2	2	2	2	2	3	4
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	3	3	3	4	4	4	5	5	6	6	6	6	6	7
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
CORNEAL OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	320 ppm	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	4	4	4	4	4	4	4	4	4	4	3	4	4	6
	320 ppm	0	0	1	1	1	0	0	0	0	0	0	1	1	2
	800 ppm	1	1	2	2	2	3	2	2	1	1	2	2	2	3
	2000 ppm	9	9	9	9	9	8	7	6	5	5	4	4	4	5
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	0	1
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	1	1	1	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
CORNEAL OPACITY	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
EXTERNAL MASS	Control	5	5	4	4	4	5
	320 ppm	3	2	2	2	2	5
	800 ppm	3	3	3	1	1	2
	2000 ppm	7	7	7	7	7	7
INTERNAL MASS	Control	1	1	1	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	0
M. NOSE	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1
M. PERI MOUTH	Control	0	0	0	0	0	0
	320 ppm	1	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. PERI EAR	Control	1	1	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day				32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
		29-7	30-7	31-7												
M. FORLIMB	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	1	1	1	1	1	1
M. POSTERIOR DORSUM	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

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		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	1	1	1	1	1	1	1	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	1	1	1	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. ABDOMEN	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	2	1	1	1	1	1	1	1	1	1	2
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	2	2	2	2	2	2	2	2	2	2
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1

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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. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	800 ppm	0	0	1	1	1	2	1	1	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	1	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
M. GENITALIA	Control	1	1	1	1	1	1	1	1	1	1	0	0	0	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	800 ppm	0	0	0	0	0	1	1	1	0	0	1	1	1	2
	2000 ppm	4	4	4	4	4	4	4	3	3	3	2	2	2	2
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
M. FORLIMB	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. BREAST	Control	1	1	1	1	1	1
	320 ppm	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1
	2000 ppm	1	2	2	2	2	2
M. ABDOMEN	Control	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	2
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	1	1	1
M. ANTERIOR. DORSUM	Control	2	2	2	2	2	2
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1
M. GENITALIA	Control	1	1	1	1	1	2
	320 ppm	1	1	1	1	1	3
	800 ppm	2	2	2	0	0	1
	2000 ppm	3	2	2	1	1	1
M. TAIL	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	1	1	1	1	1	1
	2000 ppm	1	1	1	1	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
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		29-7	30-7	31-7												
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	2	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	2	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	800 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1	1	1	1	1	2	2	2	1
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	0	0	0	1
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	1	0	0	0	0	0	0	0	0	1	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	1	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	800 ppm	0	0	1	0	0	0	0	0	0	0	0	1	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	1	0	0	0
TACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
ANEMIA	Control	1	1	1	1	1	1	1	1	1	1	0	0	0	0
	320 ppm	0	1	1	1	1	0	1	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	3	3	3	1	2	1	2	2	1	1	1	2
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	1	1	1	1	1	1	1	1	1	0	0	0	0	0
	800 ppm	0	1	1	1	1	1	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	3	3
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	2	0	0	0	1	0	0	0	0	0	1	0	0
	800 ppm	0	0	0	1	0	0	0	0	0	1	0	0	0	0
	2000 ppm	1	2	1	1	1	1	0	0	0	0	2	2	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	2
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
TACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
ANEMIA	Control	1	1	1	0	0	1
	320 ppm	0	1	1	0	1	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	2	2	3	3	3	2
JAUNDISE	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
CRUSTA	Control	0	0	1	1	1	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	1	1
	2000 ppm	3	3	3	3	4	4
HEMORRHAGE	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	1	1	0	0	1
	2000 ppm	0	2	1	1	0	0
IRREGULAR BREATHING	Control	0	0	0	0	1	2
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	1	2
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
TACHYPNEA	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

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		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	36	43	44	45	48	49	50	50	50	50	50	50	50
	800 ppm	34	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	800 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 83

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												
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	800 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
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
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	800 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 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
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	50	50	50	50	49	49	49	49	47	47	47	47	47	47
	800 ppm	50	50	50	50	50	50	50	50	50	50	50	49	49	49
	2000 ppm	50	50	50	49	49	49	49	49	49	49	49	49	49	49
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	2	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	1	0	0	16	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
	320 ppm	0	0	0	0	0	0	0	2	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	23	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
	320 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 86

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
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	47	47	47	47	47	47	47	47	47	46	46	46	45	45
	800 ppm	49	49	49	47	47	47	47	46	46	46	46	46	45	45
	2000 ppm	49	49	49	49	49	49	49	49	48	47	47	46	46	45
SMALL STOOL	Control	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	1	1	0	0	0	1	0	0	0	1	1	0	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	1	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	320 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	800 ppm	0	1	1	0	0	0	1	0	0	0	1	1	0	0
	2000 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
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0

STUDY NO. : 0328
ANIMAL : RAT F944/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
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	320 ppm	45	45	45	45	45	43	43	43	42	41	41	39	39	39
	800 ppm	45	45	45	45	43	43	42	42	41	41	41	41	41	39
	2000 ppm	45	45	45	45	45	44	43	41	40	39	38	38	37	37
SMALL STOOL	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	320 ppm	0	0	0	0	1	1	1	1	1	1	1	0	0	2
	800 ppm	0	0	1	1	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	1	1	0	0	0	0	0	0
OLIGO-STOOL	Control	1	0	0	0	0	0	0	0	0	1	0	0	0	1
	320 ppm	0	0	0	0	1	1	1	1	1	1	1	0	2	2
	800 ppm	0	0	1	1	0	0	0	0	0	0	0	0	2	0
	2000 ppm	0	0	1	0	0	0	0	1	1	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	320 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0328
 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
DEEP BREATHING	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0
	320 ppm	37	37	37	37	36	35
	800 ppm	39	39	39	39	39	39
	2000 ppm	37	35	35	35	34	34
SMALL STOOL	Control	1	4	3	0	0	2
	320 ppm	0	1	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
OLIGO-STOOL	Control	1	2	0	0	4	4
	320 ppm	0	1	0	0	0	0
	800 ppm	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	1	0
	320 ppm	0	0	0	0	0	0
	800 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

APPENDIX B 1

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

STUDY NO. : 0328
 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	123±	4	154±	7	185±	7	209±	8	229±	8	246±	9	260±	10		
320 ppm	123±	4	153±	7	184±	8	208±	8	227±	9	242±	10	256±	11		
800 ppm	123±	4	152±	6	183±	7	208±	8	226±	9	213±	36**	244±	16**		
2000 ppm	123±	4	149±	7**	178±	8**	200±	9**	217±	9**	231±	9**	243±	10**		

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0328
 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	
Control	270±	10	281±	10	293±	11	299±	11	307±	12	312±	13
320 ppm	268±	12	279±	13	291±	14	299±	15	306±	15	311±	16
800 ppm	262±	12**	275±	11*	286±	11*	295±	11	302±	12	307±	13
2000 ppm	255±	10**	265±	10**	276±	10**	283±	11**	290±	11**	294±	12**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0328
 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	324±	12	344±	14	352±	14	363±	14	373±	16	383±	16	391±	16		
320 ppm	323±	17	344±	18	352±	17	366±	17	379±	17	387±	19	394±	18		
800 ppm	318±	12	340±	12	348±	14	362±	15	375±	15	383±	17	391±	17		
2000 ppm	304±	12**	325±	13**	332±	13**	345±	13**	356±	13**	364±	14**	371±	14**		

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0328
 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	394± 16		402± 16		406± 16		409± 17		413± 17		416± 17	418± 17
320 ppm	399± 18		404± 18		408± 19		412± 19		416± 20		418± 20	419± 20
800 ppm	396± 17		401± 18		405± 19		408± 19		411± 20		413± 20	413± 21
2000 ppm	375± 14**		381± 15**		382± 15**		386± 15**		389± 17**		391± 17**	392± 16**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett												

(HAN260)

BAIS 3

STUDY NO. : 0328
 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	
Control	421±	19	422±	19	422±	26	421±	23	421±	26	418±	31
320 ppm	419±	19	421±	20	418±	27	419±	19	415±	21	411±	21
800 ppm	412±	22	414±	22	413±	23	410±	24*	406±	25**	402±	30*
2000 ppm	391±	17**	391±	16**	388±	18**	385±	18**	383±	19**	377±	19**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0328
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	414±	28	405±	33	404±	28
320 ppm	397±	26**	389±	39	384±	43*
800 ppm	388±	22**	379±	23**	374±	22**
2000 ppm	361±	21**	351±	28**	350±	26**
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. : 0328
 ANIMAL : RAT F344/DuCrJ
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 7

Group Name	Administration week		0		1		2		3		4		5		6	
Control	97±	4	111±	5	123±	6	131±	6	140±	7	147±	8	152±	8		
320 ppm	97±	4	110±	5	121±	5	129±	6	137±	7	144±	7*	149±	8		
800 ppm	97±	4	110±	4	122±	5	129±	6	136±	6	142±	7**	147±	8**		
2000 ppm	97±	4	108±	5**	117±	6**	124±	6**	130±	7**	134±	8**	136±	9**		

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0328
 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	157±	9	161±	11	165±	11	168±	11	170±	11	171±	11	172±	12		
320 ppm	153±	9	155±	9**	159±	9**	162±	10*	164±	10*	165±	10*	166±	10**		
800 ppm	151±	9**	154±	10**	158±	10**	161±	11**	164±	11*	164±	11**	165±	11**		
2000 ppm	140±	8**	142±	9**	145±	9**	147±	10**	149±	10**	150±	10**	151±	10**		
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett																

(HAN260)

BAIS 3

STUDY NO. : 0328
 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	174±	12	183±	13	186±	13	191±	14	196±	16	201±	16	203±	17		
320 ppm	167±	10**	175±	11**	179±	11**	183±	11*	188±	12**	191±	12**	194±	14*		
800 ppm	167±	11**	175±	12**	179±	13*	183±	14**	189±	14*	192±	15**	196±	15*		
2000 ppm	152±	10**	158±	10**	161±	10**	164±	12**	169±	13**	171±	12**	173±	13**		

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

Test of Dunnett

(HAN260)

BALS 3

STUDY NO. : 0328
 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	66
Control	206± 18		209± 20		213± 20		219± 21		224± 21		230± 23	235± 25
320 ppm	197± 14*		201± 16*		205± 16*		208± 16**		214± 18*		219± 18*	223± 20*
800 ppm	198± 16*		201± 16*		204± 17*		208± 18**		212± 19**		216± 20**	220± 22**
2000 ppm	175± 13**		177± 14**		179± 14**		182± 16**		186± 17**		186± 17**	190± 19**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett												

(HAN260)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 11

Group Name	Administration week											
	70		74		78		82		86		90	
Control	242±	26	250±	27	257±	29	261±	30	266±	32	268±	32
320 ppm	229±	20*	236±	21*	242±	21*	244±	22**	249±	20	251±	23**
800 ppm	224±	23**	231±	24**	236±	25**	240±	30**	243±	23**	246±	24**
2000 ppm	193±	20**	198±	22**	203±	27**	205±	25**	207±	25**	210±	25**

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

Test of Dunnett

(HAN260)

BALS 3

STUDY NO. : 0328
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	269±	27	266±	31	263±	36
320 ppm	248±	29**	254±	22	254±	23
800 ppm	250±	27**	252±	28	249±	31
2000 ppm	211±	26**	213±	26**	213±	26**

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

Test of Dunnett

(HAN260)

BAIS 3

APPENDIX C 1

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

STUDY NO. : 0328
 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	13.4± 0.7	14.4± 0.8	15.0± 0.8	15.3± 0.9	15.5± 1.1	15.1± 1.1	15.4± 1.1
320 ppm	13.3± 0.7	14.4± 0.9	15.0± 0.9	15.3± 1.0	15.5± 1.0	15.3± 1.1	15.6± 1.2
800 ppm	13.2± 0.7	14.4± 0.7	15.0± 0.9	15.0± 0.9	11.5± 4.7**	15.9± 1.6*	15.9± 1.3*
2000 ppm	13.0± 0.8**	14.3± 0.8	14.8± 0.9	14.6± 0.9**	14.5± 1.0**	14.4± 0.9**	14.8± 0.9*

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

Test of Dunnett

(HAN260)

BAIS 8

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

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	15.4± 1.1	15.8± 1.2	15.5± 1.1	15.5± 1.1	15.2± 1.1	15.3± 1.0	15.0± 1.0
320 ppm	15.7± 1.3	16.0± 1.6	15.8± 1.9	15.9± 1.6	15.5± 1.3	15.4± 1.4	15.4± 1.4
800 ppm	15.4± 1.1	15.6± 1.4	15.4± 1.3	15.4± 1.4	15.1± 1.3	15.2± 1.3	15.0± 1.3
2000 ppm	14.7± 0.9**	15.0± 1.0**	14.9± 1.1*	15.1± 1.3	14.9± 1.3	15.0± 1.2	14.8± 1.2

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

Test of Dunnett

STUDY NO. : 0328
 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	15.3± 1.2	15.8± 1.2	15.6± 1.3	15.4± 1.4	16.1± 1.4	16.0± 1.6	15.8± 1.6
320 ppm	15.9± 1.2	16.2± 1.5	16.6± 1.5**	16.2± 1.5	16.7± 1.7	16.8± 1.9	16.5± 1.7
800 ppm	15.5± 1.5	16.1± 1.8	16.2± 1.7	16.0± 1.8	16.2± 1.6	16.3± 1.7	16.3± 1.9
2000 ppm	15.2± 1.5	15.9± 1.8	16.2± 1.9	16.0± 1.9	16.5± 2.0	16.6± 2.1	16.3± 2.1
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS 3

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration		week-day(effective)		week-end(effective)		week-day(effective)		week-end(effective)		week-day(effective)		week-end(effective)	
	46-7 (7)		50-7 (7)		54-7 (7)		58-7 (7)		62-7 (7)		66-7 (7)		70-7 (7)	
Control	16.6±	1.8	16.0±	1.7	16.0±	2.0	16.4±	1.8	15.7±	1.5	16.0±	1.6	16.8±	1.5
320 ppm	16.6±	1.8	16.5±	1.9	16.8±	1.9	17.1±	2.0	16.3±	1.7	16.4±	1.9	17.0±	1.9
800 ppm	16.5±	1.9	16.1±	1.8	16.4±	2.0	16.8±	2.2	16.1±	2.0	15.9±	1.8	16.5±	1.7
2000 ppm	16.7±	2.2	16.3±	2.0	16.6±	2.1	16.7±	2.2	16.3±	1.9	16.7±	2.1	16.7±	1.9

Test of Dunnett

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 5

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	15.8± 2.1	16.0± 2.2	15.7± 2.0	15.9± 2.0	15.8± 2.8	15.8± 2.9	16.0± 1.9
320 ppm	17.1± 2.0*	16.2± 2.9	16.2± 2.0	16.5± 2.3	16.7± 2.2	16.5± 2.3	15.9± 3.2
800 ppm	16.5± 2.2	16.4± 2.0	16.1± 2.1	15.9± 2.2	16.3± 2.3	16.2± 2.3	15.8± 2.4
2000 ppm	16.8± 2.2	16.4± 2.2	16.2± 2.2	16.4± 2.5	16.5± 2.5	16.6± 2.9	16.3± 2.6
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS 3

STUDY NO. : 0328
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	15.6± 2.3	15.5± 2.2
320 ppm	15.9± 3.2	15.7± 2.9
800 ppm	15.6± 2.3	15.3± 2.0
2000 ppm	16.3± 2.9	16.3± 2.6

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

Test of Dunnett

(HAN260)

BAIS 3

APPENDIX C 2

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

STUDY NO. : 0328
 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	9.9± 0.6	9.8± 0.9	9.8± 0.7	10.3± 0.9	10.5± 0.9	10.1± 0.8	10.4± 0.9
320 ppm	9.6± 0.5	9.8± 0.6	9.6± 0.6	10.1± 0.7	10.1± 0.8	9.9± 0.8	10.2± 1.0
800 ppm	9.6± 0.5*	9.7± 0.6	9.5± 0.7*	9.8± 0.6	9.8± 0.6**	9.7± 0.7**	10.0± 1.2
2000 ppm	9.0± 0.5**	9.1± 0.6**	9.1± 0.7**	9.2± 0.6**	9.1± 0.7**	8.9± 0.7**	9.3± 0.7**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS 8

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 8

Group Name	Administration 8-7(7)	week-day(effective) 9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	10.2± 1.0	10.3± 0.9	10.3± 1.0	10.3± 1.0	10.2± 1.0	10.2± 1.0	10.2± 1.2
320 ppm	9.9± 0.9	9.9± 1.0	10.2± 2.1	10.1± 1.0	9.9± 0.8	9.8± 0.9	10.0± 1.2
800 ppm	9.5± 1.1**	9.5± 0.8**	9.6± 0.7**	9.6± 0.7**	9.4± 0.6**	9.7± 1.0*	9.7± 0.8
2000 ppm	8.7± 0.7**	8.8± 0.8**	8.8± 0.8**	8.9± 0.8**	8.8± 0.7**	8.9± 0.6**	9.0± 0.7**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0328
 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± 1.2	11.1± 1.7	11.3± 1.8	11.5± 1.7	11.7± 1.9	11.6± 1.7	11.6± 1.7
320 ppm	10.3± 1.1	10.6± 1.2	10.6± 1.3	10.9± 1.5	10.7± 1.3*	11.1± 1.5	11.1± 1.5
800 ppm	10.0± 0.9*	10.2± 0.9*	10.2± 1.0**	10.7± 1.1	10.6± 1.2*	10.9± 1.2	10.8± 1.4*
2000 ppm	9.2± 0.8**	9.6± 1.1**	9.6± 1.1**	9.8± 1.4**	9.8± 1.4**	10.1± 1.5**	9.9± 1.4**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0328
 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)		54-7(7)	58-7(7)	62-7(7)	66-7(7)	70-7(7)
	46-7(7)		50-7(7)						
Control	12.0± 2.0		12.0± 1.8		12.6± 2.0	12.5± 1.6	12.4± 1.7	12.7± 1.8	13.3± 1.8
320 ppm	11.5± 1.7		11.4± 1.9		11.7± 1.7	12.1± 1.7	11.9± 1.6	12.2± 1.7	12.9± 1.8
800 ppm	11.3± 1.6		11.1± 1.3*		11.4± 1.3*	12.0± 1.6	12.0± 1.4	12.0± 1.5	12.6± 1.5
2000 ppm	10.4± 1.7**		10.3± 1.7**		10.8± 1.9**	11.1± 2.1**	11.7± 2.1	11.2± 2.0**	11.7± 2.0**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0328
 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	13.6± 1.8	13.3± 1.8	13.7± 2.1	13.6± 1.9	13.6± 2.1	13.8± 2.5	13.5± 2.5
320 ppm	13.0± 1.9	12.7± 1.7	12.5± 1.9**	12.7± 1.9*	12.5± 2.3	12.7± 2.4	12.6± 3.0
800 ppm	12.7± 1.4	12.6± 2.4	12.7± 1.4*	12.8± 1.5	13.1± 1.8	13.1± 1.4	13.1± 1.5
2000 ppm	11.8± 2.1**	11.6± 1.9**	12.0± 1.9**	12.0± 1.9**	12.0± 2.1**	12.2± 2.0**	12.1± 2.1**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS 3

STUDY NO. : 0328
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	13.6± 2.5	13.0± 2.5
320 ppm	13.2± 1.8	13.2± 2.0
800 ppm	13.2± 1.8	13.1± 1.7
2000 ppm	12.5± 2.1	12.3± 2.4
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett		

(HAN260)

BAIS 3

APPENDIX D 1

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

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g / kg / d a y
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration (weeks)									
	1	2	3	4	5	6	7			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
320 ppm	0.028± 0.001	0.025± 0.001	0.023± 0.001	0.022± 0.001	0.020± 0.001	0.019± 0.001	0.019± 0.001	0.019± 0.001		
800 ppm	0.069± 0.002	0.063± 0.002	0.058± 0.003	0.053± 0.003	0.042± 0.013	0.053± 0.007	0.049± 0.004	0.049± 0.004		
2000 ppm	0.174± 0.011	0.160± 0.007	0.148± 0.008	0.134± 0.007	0.126± 0.008	0.118± 0.007	0.116± 0.007	0.116± 0.007		

(HAN300)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration (weeks)									
	8	9	10	11	12	13	14			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
320 ppm	0.018± 0.001	0.018± 0.001	0.017± 0.002	0.017± 0.001	0.016± 0.001	0.015± 0.001	0.015± 0.001	0.015± 0.001		
800 ppm	0.045± 0.003	0.044± 0.003	0.042± 0.003	0.041± 0.003	0.040± 0.003	0.039± 0.003	0.038± 0.003	0.038± 0.003		
2000 ppm	0.111± 0.006	0.109± 0.008	0.105± 0.008	0.104± 0.009	0.102± 0.008	0.101± 0.008	0.098± 0.008	0.098± 0.008		

(HAN300)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration (weeks)											
	18	22	26	30	34	38	42					
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000				
320 ppm	0.015± 0.001	0.015± 0.001	0.014± 0.001	0.014± 0.001	0.014± 0.001	0.014± 0.001	0.014± 0.002	0.013± 0.001				
800 ppm	0.037± 0.003	0.037± 0.004	0.036± 0.003	0.034± 0.004	0.034± 0.003	0.033± 0.003	0.033± 0.003	0.033± 0.004				
2000 ppm	0.093± 0.009	0.096± 0.010	0.094± 0.010	0.090± 0.010	0.090± 0.011	0.090± 0.011	0.087± 0.011					

(HAN300)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration (weeks)									
	46	50	54	58	62	66	70			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
320 ppm	0.013± 0.002	0.013± 0.002	0.013± 0.002	0.013± 0.002	0.013± 0.002	0.013± 0.001	0.013± 0.002	0.013± 0.002		
800 ppm	0.033± 0.004	0.032± 0.004	0.032± 0.004	0.033± 0.004	0.031± 0.004	0.031± 0.004	0.031± 0.004	0.032± 0.004		
2000 ppm	0.088± 0.011	0.085± 0.010	0.086± 0.011	0.086± 0.011	0.083± 0.010	0.085± 0.011	0.086± 0.010			

(HAN300)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/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	0.000± 0.000		
320 ppm	0.013± 0.002	0.012± 0.002	0.012± 0.002	0.013± 0.002	0.013± 0.002	0.013± 0.002	0.013± 0.002	0.013± 0.003		
800 ppm	0.032± 0.004	0.032± 0.004	0.031± 0.004	0.032± 0.005	0.033± 0.007	0.033± 0.005	0.032± 0.005	0.032± 0.005		
2000 ppm	0.086± 0.011	0.085± 0.012	0.084± 0.012	0.086± 0.013	0.087± 0.013	0.090± 0.016	0.090± 0.014			

(HAN300)

BAIS 3

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
UNIT : g/kg/day
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 6

Group Name	Administration (weeks)	
	102	104
Control	0.000± 0.000	0.000± 0.000
320 ppm	0.013± 0.002	0.013± 0.002
800 ppm	0.033± 0.005	0.033± 0.005
2000 ppm	0.094± 0.020	0.094± 0.016

(HAN300)

BAIS 3

APPENDIX D 2

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

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 7

Group Name	Administration (weeks)											
	1	2	3	4	5	6	7					
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000			
320 ppm	0.028± 0.001	0.026± 0.001	0.024± 0.001	0.024± 0.001	0.023± 0.001	0.021± 0.001	0.021± 0.001	0.021± 0.001	0.021± 0.001			
800 ppm	0.070± 0.002	0.064± 0.003	0.059± 0.003	0.057± 0.002	0.055± 0.002	0.053± 0.002	0.053± 0.002	0.053± 0.002	0.053± 0.002			
2000 ppm	0.166± 0.009	0.156± 0.008	0.146± 0.009	0.142± 0.009	0.135± 0.008	0.130± 0.006	0.130± 0.006	0.132± 0.007	0.132± 0.007			

(HAN300)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 8

Group Name	Administration (weeks)									
	8	9	10	11	12	13	14			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
320 ppm	0.020± 0.001	0.020± 0.001	0.020± 0.004	0.020± 0.001	0.019± 0.001	0.019± 0.001	0.019± 0.001	0.019± 0.002		
800 ppm	0.049± 0.005	0.048± 0.003	0.048± 0.003	0.047± 0.003	0.046± 0.002	0.047± 0.004	0.047± 0.004	0.047± 0.003		
2000 ppm	0.123± 0.007	0.121± 0.007	0.119± 0.007	0.120± 0.007	0.117± 0.007	0.119± 0.007	0.118± 0.008			

(HAN300)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 9

Group Name	Administration (weeks)							
	18	22	26	30	34	38	42	
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
320 ppm	0.019± 0.002	0.019± 0.002	0.019± 0.002	0.019± 0.002	0.018± 0.002	0.018± 0.002	0.018± 0.002	0.018± 0.002
800 ppm	0.046± 0.003	0.046± 0.003	0.045± 0.004	0.045± 0.004	0.044± 0.005	0.045± 0.004	0.044± 0.005	0.044± 0.005
2000 ppm	0.116± 0.007	0.119± 0.010	0.118± 0.009	0.115± 0.011	0.115± 0.012	0.116± 0.012	0.113± 0.011	0.113± 0.011

(HAN300)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 10

Group Name	Administration (weeks)									
	46	50	54	58	62	66	70			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
320 ppm	0.018± 0.002	0.018± 0.003	0.018± 0.002	0.018± 0.002	0.017± 0.002	0.017± 0.002	0.017± 0.002	0.018± 0.002		
800 ppm	0.045± 0.006	0.044± 0.005	0.044± 0.005	0.045± 0.005	0.045± 0.005	0.044± 0.005	0.044± 0.005	0.045± 0.006		
2000 ppm	0.117± 0.015	0.114± 0.013	0.118± 0.015	0.119± 0.016	0.125± 0.017	0.117± 0.013	0.121± 0.014			

(HAN300)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 11

Group Name	Administration (weeks)									
	74	78	82	86	90	94	98			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
320 ppm	0.018± 0.002	0.017± 0.002	0.016± 0.002	0.016± 0.002	0.016± 0.003	0.016± 0.003	0.016± 0.003	0.016± 0.004		
800 ppm	0.044± 0.006	0.044± 0.006	0.043± 0.006	0.042± 0.006	0.043± 0.007	0.042± 0.006	0.042± 0.006	0.042± 0.006		
2000 ppm	0.119± 0.014	0.115± 0.013	0.117± 0.012	0.116± 0.012	0.115± 0.015	0.115± 0.014	0.115± 0.014	0.115± 0.013		

(HAN300)

BAIS 3

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
UNIT : g/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 12

Group Name	Administration (weeks)	
	102	104
Control	0.000± 0.000	0.000± 0.000
320 ppm	0.017± 0.002	0.017± 0.002
800 ppm	0.043± 0.007	0.042± 0.007
2000 ppm	0.117± 0.013	0.116± 0.015

(HAN300)

BAIS 3

APPENDIX E 1

HEMATOLOGY : SUMMARY, RAT : MALE

(2-YEAR STUDY)

STUDY NO. : 0328
 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 ⁵ /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 ³ /μl	
Control	40	8.21±	1.25	13.6±	2.4	41.4±	6.2	50.5±	2.9	16.5±	1.2	32.7±	1.3	840±	242
320 ppm	41	8.20±	1.73	13.4±	2.7	40.9±	7.2	51.0±	7.3	16.6±	2.2	32.7±	1.3	821±	242
800 ppm	41	8.62±	1.52	14.1±	2.3	42.8±	6.0	50.2±	5.5**	16.4±	1.4	32.8±	1.5	858±	217
2000 ppm	39	8.86±	1.69	14.1±	2.7	42.7±	7.7	48.3±	1.8**	15.9±	0.6**	32.9±	1.1	833±	111

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 3

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrJ
MEASURE. TIME : 1
SEX : MALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	METHEMOGLOBIN %	
Control	40	0.4±	0.2
320 ppm	41	0.4±	0.2
800 ppm	41	0.4±	0.4
2000 ppm	39	0.4±	0.3

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

Test of Dunnett

(HCL070)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : MALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	WBC 10 ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	40	7.37±	5.53	1±	1	50±	14	1±	1	0±	0	3±	2	40±	11	4±	13
320 ppm	41	10.56±	14.39	1±	1	49±	16	1±	1	0±	0	3±	1	39±	15	8±	21
800 ppm	41	8.32±	10.62	1±	1	53±	11	1±	1	0±	0	3±	2	38±	10	4±	14
2000 ppm	39	7.08±	2.25	1±	1	55±	11	1±	1	0±	0	3±	2	38±	10	2±	2

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 3

APPENDIX E 2

HEMATOLOGY : SUMMARY, RAT : FEMALE

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 4

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	38	8.09±	1.30	14.6±	2.2	43.2±	5.8	54.5±	7.8	18.2±	1.1	33.6±	1.7	624±	122
320 ppm	34	8.21±	1.10	14.5±	1.6	43.0±	3.9	53.1±	6.2	17.9±	1.8	33.7±	0.8	682±	131
800 ppm	38	8.03±	0.99	14.3±	1.6*	42.3±	4.5	53.0±	4.7*	17.8±	1.2**	33.6±	0.8	661±	127
2000 ppm	34	7.99±	1.51	13.6±	2.7**	40.9±	7.1**	51.5±	2.2**	17.0±	0.9**	33.0±	2.2	664±	99

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 3

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : FEMALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	METHEMOGLOBIN %
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Control	38	0.3± 0.2
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320 ppm	34	0.3± 0.2
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800 ppm	38	0.3± 0.2
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2000 ppm	34	0.4± 0.3
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Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	WBC 10 ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	38	7.22±	28.68	1±	1	49±	12	2±	1	0±	0	3±	2	41±	11	4±	14
320 ppm	34	2.82±	2.59	1±	1	45±	14	2±	1	0±	0	3±	2	45±	13	4±	13
800 ppm	38	3.65±	8.71	1±	1	46±	11	2±	1	0±	0	3±	2	46±	13	3±	13
2000 ppm	34	2.42±	1.85	1±	1	49±	10	2±	1	0±	0	3±	2	45±	9	1±	2

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 3

APPENDIX F 1

BIOCHEMISTRY : SUMMARY, RAT : MALE

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	TOTAL PROTEIN g/dl		ALBUMIN g/dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	40	6.5±	0.3	3.3±	0.2	1.1±	0.1	0.19±	0.10	149±	17	175±	50	80±	61
320 ppm	41	6.6±	0.4	3.3±	0.3	1.0±	0.1	0.34±	0.63	143±	21	187±	45	103±	79
800 ppm	41	6.6±	0.3	3.3±	0.2	1.0±	0.1	0.20±	0.17	148±	13	219±	45**	125±	70*
2000 ppm	39	6.5±	0.3	3.3±	0.2	1.0±	0.1*	0.15±	0.03	149±	23	217±	51**	146±	79**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 3

STUDY NO. : 0328
 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	40	245±	76	85±	43	38±	17	184±	87	205±	86	12±	8	88±	28
320 ppm	41	267±	61	243±	774	70±	154	373±	765	286±	539	25±	33*	147±	307
800 ppm	41	299±	55**	92±	50	40±	15	166±	71	263±	373	31±	24**	85±	29
2000 ppm	39	312±	63**	113±	123	49±	49	165±	78	201±	178	38±	21**	82±	49*

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	UREA NITROGEN mg/dl		CREATININE mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	40	17.2±	3.4	0.6±	0.1	142±	2	3.8±	0.4	106±	2	10.5±	0.3	4.3±	0.5
320 ppm	41	20.7±	10.9	0.6±	0.1	142±	3	3.9±	0.4	107±	3	10.5±	0.5	4.5±	1.1
800 ppm	41	23.8±	5.1**	0.7±	0.1**	142±	2	3.9±	0.4	106±	2	10.6±	0.4	4.4±	0.6
2000 ppm	39	30.7±	9.6**	0.7±	0.1**	141±	2	3.9±	0.3	105±	2	10.7±	0.2**	4.6±	0.6

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 3

APPENDIX F 2

BIOCHEMISTRY : SUMMARY, RAT : FEMALE

(2-YEAR STUDY)

STUDY NO. : 0328
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	6.6±	0.5	3.8±	0.3	1.4±	0.1	0.45±	1.89	145±	18	126±	21	44±	31
320 ppm	34	6.7±	0.3	3.9±	0.2	1.4±	0.1	0.15±	0.08	153±	15	149±	25**	53±	47
800 ppm	38	6.9±	0.4**	4.0±	0.3*	1.4±	0.1	0.14±	0.02	153±	15	165±	25**	55±	53
2000 ppm	34	7.0±	0.4**	4.1±	0.2**	1.4±	0.1	0.14±	0.03	158±	11**	175±	24**	60±	113

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

Test of Dunnett

(HCL074)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		GOT IU/l		GPT IU/l		LDH IU/l		ALP IU/l		G-GTP IU/l		CPK IU/l	
Control	38	222±	45	141±	194	59±	66	384±	919	129±	168	5±	5	123±	173
320 ppm	34	251±	43**	116±	86	54±	29	240±	172	113±	44	7±	4**	106±	86
800 ppm	38	275±	40**	114±	61	54±	28	215±	97	104±	37	8±	3**	82±	25
2000 ppm	34	292±	33**	108±	44	55±	24	193±	68	109±	53	10±	5**	78±	22

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 3

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	UREA NITROGEN mg/dl		CREATININE mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	38	16.3±	3.6	0.5±	0.1	141±	2	3.6±	0.4	105±	2	10.4±	0.2	4.1±	0.7
320 ppm	34	17.4±	2.0*	0.5±	0.1	141±	2	3.6±	0.3	105±	2	10.5±	0.3	4.0±	0.8
800 ppm	38	17.8±	2.1**	0.5±	0.1	141±	2	3.6±	0.3	104±	2	10.5±	0.3*	3.9±	0.7
2000 ppm	34	19.4±	2.2**	0.5±	0.1	140±	2	3.7±	0.3	105±	2	10.6±	0.3**	4.0±	0.7

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 3

APPENDIX G 1

URINALYSIS : SUMMARY, RAT : MALE

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : MALE

URINALYSIS

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	pH_____								CHI	Protein_____					CHI	Glucose_____					CHI	Ketone body					CHI	Occult blood					CHI	
		5.0	6.0	6.5	7.0	7.5	8.0	8.5	—		±	+	2+	3+	4+		—	±	+	2+	3+		4+	—	±	+	2+		3+	4+	—	±	+		2+
Control	40	0	0	3	11	10	9	7		0	0	0	7	20	13		40	0	0	0	0	0		32	7	1	0	0	0		40	0	0	0	0
320 ppm	44	0	1	4	10	14	12	3		0	0	0	2	27	15		44	0	0	0	0	0		34	9	1	0	0	0		43	0	0	0	1
800 ppm	41	0	0	4	8	15	14	0	*	0	0	0	2	29	10		41	0	0	0	0	0		40	1	0	0	0	0	*	41	0	0	0	0
2000 ppm	42	0	1	6	18	11	4	2		0	0	0	0	35	7	**	42	0	0	0	0	0		42	0	0	0	0	0	**	41	0	1	0	0

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

Test of CHI SQUARE

(HCL101)

BAIS 8

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
MEASURE TIME : 1
SEX : MALE

URINALYSIS

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	Urobilinogen ± + 2+ 3+ 4+ CHI
Control	40	40 0 0 0 0
320 ppm	44	44 0 0 0 0
800 ppm	41	41 0 0 0 0
2000 ppm	42	42 0 0 0 0

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

Test of CHI SQUARE

(HCL101)

BAIS 3

APPENDIX G 2

URINALYSIS : SUMMARY, RAT : FEMALE

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrJ
 MEASURE. TIME : 1
 SEX : FEMALE

URINALYSIS

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	pH							CHI	Protein					CHI	Glucose					CHI	Ketone body					CHI	Occult blood					CHI		
		5.0	6.0	6.5	7.0	7.5	8.0	8.5		—	±	+	2+	3+		4+	—	±	+	2+		3+	4+	—	±	+		2+	3+	4+	—	±		+	2+
Control	38	0	2	11	6	7	9	3		0	0	10	19	7	2		38	0	0	0	0	0		10	25	3	0	0	0		38	0	0	0	0
320 ppm	36	0	1	8	10	5	10	2		0	1	9	19	3	4		36	0	0	0	0	0		15	20	1	0	0	0		35	0	0	0	1
800 ppm	38	0	0	7	4	10	15	2		0	0	7	22	5	4		38	0	0	0	0	0		26	11	1	0	0	0	**	35	0	1	0	2
2000 ppm	34	0	0	7	7	7	12	1		0	2	13	17	1	1		34	0	0	0	0	0		33	1	0	0	0	0	**	31	2	0	0	1

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

Test of CHI SQUARE

(HCL101)

BAIS 3

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
MEASURE TIME : 1
SEX : FEMALE

URINALYSIS

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	Urobilinogen					CHI
		±	+	2+	3+	4+	
Control	38	37	1	0	0	0	
320 ppm	36	36	0	0	0	0	
800 ppm	38	38	0	0	0	0	
2000 ppm	34	34	0	0	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS 3

APPENDIX H 1

GROSS FINDINGS : SUMMARY, RAT : MALE ALL ANIMALS
(2-YEAR STUDY)

STUDY NO. : 0328
 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	320 ppm	800 ppm	2000 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
skin/app	nodule		4 (8)	7 (14)	10 (20)	7 (14)
	mass		0 (0)	0 (0)	1 (2)	0 (0)
	scab		0 (0)	1 (2)	0 (0)	0 (0)
subcutis	edema		0 (0)	0 (0)	0 (0)	1 (2)
	jaundice		0 (0)	1 (2)	0 (0)	0 (0)
	mass		5 (10)	6 (12)	2 (4)	5 (10)
	cyst		0 (0)	0 (0)	1 (2)	0 (0)
nasal cavit	hemorrhage		0 (0)	0 (0)	0 (0)	1 (2)
lung	red		0 (0)	0 (0)	0 (0)	1 (2)
	white zone		1 (2)	1 (2)	0 (0)	1 (2)
	red zone		0 (0)	0 (0)	0 (0)	1 (2)
	brown zone		0 (0)	0 (0)	1 (2)	0 (0)
	edema		0 (0)	0 (0)	0 (0)	1 (2)
	nodule		1 (2)	1 (2)	1 (2)	1 (2)
	voluminus		1 (2)	0 (0)	0 (0)	0 (0)
lymph node	enlarged		0 (0)	1 (2)	0 (0)	1 (2)
spleen	enlarged		6 (12)	11 (22)	6 (12)	1 (2)
	adhesion		0 (0)	0 (0)	1 (2)	0 (0)
heart	white		1 (2)	0 (0)	0 (0)	0 (0)
	white zone		1 (2)	0 (0)	1 (2)	0 (0)
oral cavity	mass		0 (0)	0 (0)	0 (0)	1 (2)
tongue	nodule		0 (0)	0 (0)	0 (0)	1 (2)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name	Control	320 ppm	800 ppm	2000 ppm
		NO. of Animals	50 (%)	50 (%)	50 (%)	50 (%)
forestomach	nodule		1 (2)	0 (0)	0 (0)	0 (0)
	ulcer		0 (0)	0 (0)	1 (2)	0 (0)
gl stomach	nodule		0 (0)	0 (0)	2 (4)	1 (2)
stomach	gas		0 (0)	0 (0)	0 (0)	1 (2)
small intes	red zone		0 (0)	0 (0)	1 (2)	0 (0)
	gas		0 (0)	0 (0)	0 (0)	1 (2)
liver	enlarged		0 (0)	0 (0)	2 (4)	0 (0)
	pale		0 (0)	0 (0)	0 (0)	1 (2)
	white zone		0 (0)	1 (2)	0 (0)	1 (2)
	nodule		0 (0)	2 (4)	2 (4)	8 (16)
	rough		2 (4)	6 (12)	3 (6)	0 (0)
	nodular		0 (0)	0 (0)	0 (0)	1 (2)
	herniation		2 (4)	3 (6)	6 (12)	3 (6)
	nodule		0 (0)	1 (2)	0 (0)	0 (0)
pancreas	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
kidney	nodule		0 (0)	1 (2)	0 (0)	2 (4)
	cyst		0 (0)	1 (2)	0 (0)	0 (0)
	granular		7 (14)	10 (20)	27 (54)	32 (64)
	adhesion		0 (0)	0 (0)	1 (2)	0 (0)
	urine:marked retention		0 (0)	1 (2)	0 (0)	0 (0)
urin bladd	urine:red		1 (2)	1 (2)	0 (0)	1 (2)
	enlarged		6 (12)	4 (8)	6 (12)	2 (4)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name	Control	320 ppm	800 ppm	2000 ppm
		NO. of Animals	50 (%)	50 (%)	50 (%)	50 (%)
pituitary	red zone		4 (8)	7 (14)	1 (2)	3 (6)
	black zone		2 (4)	3 (6)	1 (2)	2 (4)
	nodule		0 (0)	1 (2)	1 (2)	1 (2)
	cyst		1 (2)	1 (2)	1 (2)	0 (0)
thyroid	enlarged		4 (8)	6 (12)	4 (8)	4 (8)
	nodule		1 (2)	0 (0)	0 (0)	1 (2)
adrenal	enlarged		2 (4)	2 (4)	1 (2)	1 (2)
testis	atrophic		2 (4)	0 (0)	0 (0)	1 (2)
	red		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		24 (48)	36 (72)	33 (66)	33 (66)
prep/cli gl	nodule		3 (6)	1 (2)	1 (2)	4 (8)
brain	red zone		0 (0)	0 (0)	1 (2)	1 (2)
	hemorrhage		0 (0)	0 (0)	2 (4)	0 (0)
spinal cord	red zone		0 (0)	0 (0)	1 (2)	0 (0)
	hemorrhage		0 (0)	0 (0)	1 (2)	0 (0)
eye	white		4 (8)	1 (2)	4 (8)	8 (16)
Zymbal gl	nodule		0 (0)	0 (0)	0 (0)	4 (8)
bone	nodule		1 (2)	0 (0)	0 (0)	0 (0)
pleura	nodule		0 (0)	1 (2)	1 (2)	0 (0)
peritoneum	hemorrhage		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		2 (4)	0 (0)	2 (4)	3 (6)
	mass		1 (2)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 4

Organ	Findings	Group Name	Control	320 ppm	800 ppm	2000 ppm
		NO. of Animals	50 (%)	50 (%)	50 (%)	50 (%)
retroperit	mass		1 (2)	1 (2)	0 (0)	1 (2)
abdominal c	ascites		2 (4)	2 (4)	2 (4)	1 (2)
mesenterium	nodule		0 (0)	1 (2)	0 (0)	1 (2)
thoracic ca	hemorrhage		0 (0)	0 (0)	1 (2)	0 (0)
	pleural fluid		0 (0)	1 (2)	1 (2)	3 (6)
other	scab		5 (10)	13 (26)	8 (16)	5 (10)
	tail:nodule		1 (2)	1 (2)	2 (4)	2 (4)
	hindlimb:nodule		2 (4)	0 (0)	0 (0)	0 (0)
whole body	anemic		0 (0)	0 (0)	1 (2)	0 (0)

(HPT080)

BAIS 3

APPENDIX H 2

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

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 5

Organ	Findings	Group Name NO. of Animals	Control	320 ppm	800 ppm	2000 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
skin/app	nodule		1 (2)	0 (0)	0 (0)	1 (2)
	scab		0 (0)	1 (2)	0 (0)	1 (2)
subcutis	edema		0 (0)	0 (0)	0 (0)	1 (2)
	jaundice		1 (2)	2 (4)	1 (2)	0 (0)
	mass		10 (20)	7 (14)	6 (12)	12 (24)
lung	red		0 (0)	0 (0)	0 (0)	1 (2)
	white zone		1 (2)	0 (0)	0 (0)	2 (4)
	red zone		0 (0)	0 (0)	1 (2)	0 (0)
	brown zone		0 (0)	0 (0)	1 (2)	0 (0)
	edema		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		0 (0)	2 (4)	2 (4)	2 (4)
lymph node	enlarged		0 (0)	1 (2)	1 (2)	1 (2)
spleen	enlarged		5 (10)	9 (18)	3 (6)	5 (10)
	deformed		0 (0)	0 (0)	0 (0)	1 (2)
	adhesion		0 (0)	1 (2)	1 (2)	0 (0)
tongue	nodule		0 (0)	0 (0)	1 (2)	0 (0)
forestomach	nodule		0 (0)	0 (0)	0 (0)	1 (2)
	ulcer		1 (2)	2 (4)	0 (0)	0 (0)
gl stomach	ulcer		0 (0)	1 (2)	0 (0)	0 (0)
cecum	red zone		0 (0)	1 (2)	0 (0)	0 (0)
liver	pale		0 (0)	1 (2)	0 (0)	1 (2)
	black patch		0 (0)	0 (0)	1 (2)	0 (0)

STUDY NO. : 0328
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	320 ppm	800 ppm	2000 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
liver	white zone		1 (2)	0 (0)	1 (2)	0 (0)
	nodule		0 (0)	1 (2)	1 (2)	3 (6)
	rough		1 (2)	3 (6)	0 (0)	0 (0)
	nodular		1 (2)	0 (0)	0 (0)	0 (0)
	herniation		5 (10)	9 (18)	4 (8)	4 (8)
pancreas	nodule		0 (0)	0 (0)	1 (2)	1 (2)
kidney	white zone		0 (0)	2 (4)	0 (0)	0 (0)
	brown zone		0 (0)	0 (0)	0 (0)	1 (2)
	cyst		1 (2)	0 (0)	0 (0)	0 (0)
	granular		0 (0)	1 (2)	1 (2)	0 (0)
	hydronephrosis		0 (0)	0 (0)	1 (2)	1 (2)
urin bladd	red zone		0 (0)	2 (4)	0 (0)	1 (2)
	urine:marked retention		0 (0)	1 (2)	0 (0)	2 (4)
	fluid:red		0 (0)	0 (0)	0 (0)	1 (2)
pituitary	enlarged		8 (16)	6 (12)	5 (10)	5 (10)
	red zone		8 (16)	4 (8)	4 (8)	10 (20)
	brown zone		1 (2)	0 (0)	0 (0)	0 (0)
	black zone		2 (4)	3 (6)	2 (4)	1 (2)
	nodule		1 (2)	5 (10)	2 (4)	2 (4)
	cyst		0 (0)	1 (2)	1 (2)	1 (2)
thyroid	enlarged		0 (0)	2 (4)	2 (4)	0 (0)
	nodule		0 (0)	1 (2)	0 (0)	0 (0)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 7

Organ	Findings	Group Name	Control	320 ppm	800 ppm	2000 ppm
		NO. of Animals	50 (%)	50 (%)	50 (%)	50 (%)
adrenal	enlarged		3 (6)	1 (2)	2 (4)	0 (0)
ovary	enlarged		1 (2)	2 (4)	1 (2)	0 (0)
	cyst		1 (2)	1 (2)	0 (0)	1 (2)
uterus	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		6 (12)	6 (12)	7 (14)	12 (24)
	cyst		1 (2)	0 (0)	0 (0)	0 (0)
	deformed		0 (0)	0 (0)	0 (0)	1 (2)
	dilated lumen		0 (0)	1 (2)	0 (0)	0 (0)
	fluid:red		0 (0)	0 (0)	1 (2)	0 (0)
vagina	nodule		0 (0)	0 (0)	1 (2)	0 (0)
prep/cli gl	nodule		1 (2)	0 (0)	0 (0)	1 (2)
brain	swollen		1 (2)	0 (0)	0 (0)	0 (0)
	red zone		1 (2)	1 (2)	0 (0)	1 (2)
	hemorrhage		0 (0)	1 (2)	0 (0)	1 (2)
	nodule		1 (2)	0 (0)	0 (0)	0 (0)
spinal cord	red zone		0 (0)	2 (4)	0 (0)	1 (2)
	hemorrhage		0 (0)	1 (2)	0 (0)	1 (2)
	nodule		0 (0)	1 (2)	0 (0)	0 (0)
eye	white		5 (10)	4 (8)	2 (4)	0 (0)
Zymbal gl	nodule		1 (2)	0 (0)	0 (0)	0 (0)
peritoneum	nodule		1 (2)	1 (2)	2 (4)	1 (2)
	mass		1 (2)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 8

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	320 ppm 50 (%)	800 ppm 50 (%)	2000 ppm 50 (%)
retroperit	mass		0 (0)	0 (0)	1 (2)	0 (0)
abdominal c	mass		0 (0)	0 (0)	0 (0)	1 (2)
	ascites		0 (0)	1 (2)	0 (0)	4 (8)
thoracic ca	nodule		0 (0)	0 (0)	1 (2)	0 (0)
	pleural fluid		0 (0)	0 (0)	1 (2)	2 (4)
other	scab		0 (0)	0 (0)	1 (2)	3 (6)
	tail:nodule		0 (0)	0 (0)	1 (2)	1 (2)
whole body	anemic		0 (0)	0 (0)	1 (2)	3 (6)
(HPT080)						BAIS 3

APPENDIX H 3

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

STUDY NO. : 0328
 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	320 ppm	800 ppm	2000 ppm
			40 (%)	44 (%)	41 (%)	39 (%)
skin/app	nodule		2 (5)	7 (16)	9 (22)	6 (15)
	mass		0 (0)	0 (0)	1 (2)	0 (0)
subcutis	jaundice		0 (0)	1 (2)	0 (0)	0 (0)
	mass		5 (13)	5 (11)	0 (0)	3 (8)
	cyst		0 (0)	0 (0)	1 (2)	0 (0)
lung	white zone		1 (3)	1 (2)	0 (0)	0 (0)
	brown zone		0 (0)	0 (0)	1 (2)	0 (0)
	nodule		1 (3)	1 (2)	0 (0)	0 (0)
spleen	enlarged		3 (8)	8 (18)	3 (7)	0 (0)
	adhesion		0 (0)	0 (0)	1 (2)	0 (0)
heart	white zone		1 (3)	0 (0)	0 (0)	0 (0)
oral cavity	mass		0 (0)	0 (0)	0 (0)	1 (3)
tongue	nodule		0 (0)	0 (0)	0 (0)	1 (3)
forestomach	nodule		1 (3)	0 (0)	0 (0)	0 (0)
	ulcer		0 (0)	0 (0)	1 (2)	0 (0)
gl stomach	nodule		0 (0)	0 (0)	2 (5)	0 (0)
liver	enlarged		0 (0)	0 (0)	1 (2)	0 (0)
	white zone		0 (0)	1 (2)	0 (0)	1 (3)
	nodule		0 (0)	2 (5)	2 (5)	6 (15)
	rough		2 (5)	6 (14)	1 (2)	0 (0)
	herniation		2 (5)	2 (5)	6 (15)	2 (5)
pancreas	nodule		0 (0)	1 (2)	0 (0)	0 (0)

STUDY NO. : 0328
 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		320 ppm		800 ppm		2000 ppm	
			40	(%)	44	(%)	41	(%)	39	(%)
kidney	nodule		0	(0)	1	(2)	0	(0)	1	(3)
	cyst		0	(0)	1	(2)	0	(0)	0	(0)
	granular		7	(18)	9	(20)	23	(56)	30	(77)
	adhesion		0	(0)	0	(0)	1	(2)	0	(0)
pituitary	enlarged		3	(8)	3	(7)	2	(5)	2	(5)
	red zone		4	(10)	7	(16)	0	(0)	3	(8)
	black zone		2	(5)	3	(7)	1	(2)	2	(5)
	nodule		0	(0)	1	(2)	1	(2)	0	(0)
	cyst		1	(3)	1	(2)	1	(2)	0	(0)
thyroid	enlarged		4	(10)	5	(11)	4	(10)	4	(10)
	nodule		1	(3)	0	(0)	0	(0)	1	(3)
adrenal	enlarged		1	(3)	2	(5)	1	(2)	1	(3)
testis	red		0	(0)	1	(2)	0	(0)	0	(0)
	nodule		23	(58)	34	(77)	28	(68)	31	(79)
prep/cli gl	nodule		2	(5)	1	(2)	1	(2)	3	(8)
eye	white		3	(8)	1	(2)	4	(10)	7	(18)
Zymbal gl	nodule		0	(0)	0	(0)	0	(0)	3	(8)
peritoneum	nodule		1	(3)	0	(0)	1	(2)	1	(3)
retroperit	mass		1	(3)	1	(2)	0	(0)	1	(3)
abdominal c	ascites		1	(3)	1	(2)	1	(2)	0	(0)
other	scab		5	(13)	13	(30)	8	(20)	5	(13)
	tail:nodule		1	(3)	1	(2)	2	(5)	2	(5)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control 40 (%)	320 ppm 44 (%)	800 ppm 41 (%)	2000 ppm 39 (%)
other	hindlimb:nodule		1 (3)	0 (0)	0 (0)	0 (0)

(HPT080)

BAIS 3

APPENDIX H 4

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

STUDY NO. : 0328
 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	320 ppm	800 ppm	2000 ppm
			38 (%)	35 (%)	39 (%)	34 (%)
skin/app	nodule		1 (3)	0 (0)	0 (0)	1 (3)
	scab		0 (0)	0 (0)	0 (0)	1 (3)
subcutis	jaundice		1 (3)	0 (0)	0 (0)	0 (0)
	mass		7 (18)	6 (17)	3 (8)	5 (15)
lung	white zone		1 (3)	0 (0)	0 (0)	2 (6)
	brown zone		0 (0)	0 (0)	1 (3)	0 (0)
spleen	enlarged		2 (5)	2 (6)	1 (3)	1 (3)
tongue	nodule		0 (0)	0 (0)	1 (3)	0 (0)
forestomach	nodule		0 (0)	0 (0)	0 (0)	1 (3)
	ulcer		1 (3)	0 (0)	0 (0)	0 (0)
liver	black patch		0 (0)	0 (0)	1 (3)	0 (0)
	white zone		1 (3)	0 (0)	1 (3)	0 (0)
	nodule		0 (0)	0 (0)	1 (3)	1 (3)
	rough		1 (3)	2 (6)	0 (0)	0 (0)
	nodular		1 (3)	0 (0)	0 (0)	0 (0)
kidney	herniation		3 (8)	6 (17)	3 (8)	2 (6)
	cyst		1 (3)	0 (0)	0 (0)	0 (0)
	granular		0 (0)	1 (3)	1 (3)	0 (0)
	enlarged		5 (13)	3 (9)	4 (10)	3 (9)
	red zone		8 (21)	4 (11)	3 (8)	8 (24)
pituitary	brown zone		1 (3)	0 (0)	0 (0)	0 (0)
	black zone		2 (5)	3 (9)	2 (5)	1 (3)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 5

Organ	Findings	Group Name NO. of Animals	Control		320 ppm		800 ppm		2000 ppm	
			38	(%)	35	(%)	39	(%)	34	(%)
pituitary	nodule		1	(3)	3	(9)	2	(5)	1	(3)
	cyst		0	(0)	1	(3)	1	(3)	1	(3)
thyroid	enlarged		0	(0)	2	(6)	2	(5)	0	(0)
	nodule		0	(0)	1	(3)	0	(0)	0	(0)
adrenal	enlarged		1	(3)	0	(0)	1	(3)	0	(0)
ovary	enlarged		0	(0)	1	(3)	1	(3)	0	(0)
	cyst		1	(3)	1	(3)	0	(0)	0	(0)
uterus	nodule		5	(13)	4	(11)	4	(10)	9	(26)
	cyst		1	(3)	0	(0)	0	(0)	0	(0)
	deformed		0	(0)	0	(0)	0	(0)	1	(3)
prep/cli gl	nodule		0	(0)	0	(0)	0	(0)	1	(3)
brain	swollen		1	(3)	0	(0)	0	(0)	0	(0)
	red zone		1	(3)	0	(0)	0	(0)	0	(0)
eye	white		5	(13)	3	(9)	2	(5)	0	(0)
peritoneum	nodule		1	(3)	0	(0)	0	(0)	0	(0)
other	scab		0	(0)	0	(0)	1	(3)	3	(9)
	tail:nodule		0	(0)	0	(0)	1	(3)	1	(3)

APPENDIX H 5

GROSS FINDINGS : SUMMARY, RAT : MALE DEAD AND MORIBUND ANIMALS
(2-YEAR STUDY)

STUDY NO. : 0328
 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 10 (%)	320 ppm 6 (%)	800 ppm 9 (%)	2000 ppm 11 (%)
skin/app	nodule		2 (20)	0 (0)	1 (11)	1 (9)
	scab		0 (0)	1 (17)	0 (0)	0 (0)
subcutis	edema		0 (0)	0 (0)	0 (0)	1 (9)
	mass		0 (0)	1 (17)	2 (22)	2 (18)
nasal cavit	hemorrhage		0 (0)	0 (0)	0 (0)	1 (9)
lung	red		0 (0)	0 (0)	0 (0)	1 (9)
	white zone		0 (0)	0 (0)	0 (0)	1 (9)
	red zone		0 (0)	0 (0)	0 (0)	1 (9)
	edema		0 (0)	0 (0)	0 (0)	1 (9)
	nodule		0 (0)	0 (0)	1 (11)	1 (9)
	voluminous		1 (10)	0 (0)	0 (0)	0 (0)
lymph node	enlarged		0 (0)	1 (17)	0 (0)	1 (9)
spleen	enlarged		3 (30)	3 (50)	3 (33)	1 (9)
heart	white		1 (10)	0 (0)	0 (0)	0 (0)
	white zone		0 (0)	0 (0)	1 (11)	0 (0)
gl stomach	nodule		0 (0)	0 (0)	0 (0)	1 (9)
stomach	gas		0 (0)	0 (0)	0 (0)	1 (9)
small intes	red zone		0 (0)	0 (0)	1 (11)	0 (0)
	gas		0 (0)	0 (0)	0 (0)	1 (9)
liver	enlarged		0 (0)	0 (0)	1 (11)	0 (0)
	pale		0 (0)	0 (0)	0 (0)	1 (9)
	nodule		0 (0)	0 (0)	0 (0)	2 (18)

STUDY NO. : 0328
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 10 (%)	320 ppm 6 (%)	800 ppm 9 (%)	2000 ppm 11 (%)
liver	rough		0 (0)	0 (0)	2 (22)	0 (0)
	nodular		0 (0)	0 (0)	0 (0)	1 (9)
	herniation		0 (0)	1 (17)	0 (0)	1 (9)
kidney	enlarged		0 (0)	1 (17)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	1 (9)
	granular		0 (0)	1 (17)	4 (44)	2 (18)
urin bladd	urine:marked retention		0 (0)	1 (17)	0 (0)	0 (0)
	urine:red		1 (10)	1 (17)	0 (0)	1 (9)
pituitary	enlarged		3 (30)	1 (17)	4 (44)	0 (0)
	red zone		0 (0)	0 (0)	1 (11)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	1 (9)
thyroid	enlarged		0 (0)	1 (17)	0 (0)	0 (0)
adrenal	enlarged		1 (10)	0 (0)	0 (0)	0 (0)
testis	atrophic		2 (20)	0 (0)	0 (0)	1 (9)
	nodule		1 (10)	2 (33)	5 (56)	2 (18)
prep/cli gl	nodule		1 (10)	0 (0)	0 (0)	1 (9)
brain	red zone		0 (0)	0 (0)	1 (11)	1 (9)
	hemorrhage		0 (0)	0 (0)	2 (22)	0 (0)
spinal cord	red zone		0 (0)	0 (0)	1 (11)	0 (0)
	hemorrhage		0 (0)	0 (0)	1 (11)	0 (0)
eye	white		1 (10)	0 (0)	0 (0)	1 (9)
Zymbal gl	nodule		0 (0)	0 (0)	0 (0)	1 (9)

STUDY NO. : 0328
 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	320 ppm	800 ppm	2000 ppm
		NO. of Animals	10 (%)	6 (%)	9 (%)	11 (%)
bone	nodule		1 (10)	0 (0)	0 (0)	0 (0)
pleura	nodule		0 (0)	1 (17)	1 (11)	0 (0)
peritoneum	hemorrhage		0 (0)	1 (17)	0 (0)	0 (0)
	nodule		1 (10)	0 (0)	1 (11)	2 (18)
	mass		1 (10)	0 (0)	0 (0)	0 (0)
abdominal c	ascites		1 (10)	1 (17)	1 (11)	1 (9)
mesenterium	nodule		0 (0)	1 (17)	0 (0)	1 (9)
thoracic ca	hemorrhage		0 (0)	0 (0)	1 (11)	0 (0)
	pleural fluid		0 (0)	1 (17)	1 (11)	3 (27)
other	hindlimb:nodule		1 (10)	0 (0)	0 (0)	0 (0)
whole body	anemic		0 (0)	0 (0)	1 (11)	0 (0)

(HPT080)

BAIS 3

APPENDIX H 6

GROSS FINDINGS : SUMMARY, RAT : FEMALE DEAD AND MORIBUND ANIMALS
(2-YEAR STUDY)

STUDY NO. : 0328
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	320 ppm	800 ppm	2000 ppm
			12 (%)	15 (%)	11 (%)	16 (%)
skin/app	scab		0 (0)	1 (7)	0 (0)	0 (0)
subcutis	edema		0 (0)	0 (0)	0 (0)	1 (6)
	jaundice		0 (0)	2 (13)	1 (9)	0 (0)
	mass		3 (25)	1 (7)	3 (27)	7 (44)
lung	red		0 (0)	0 (0)	0 (0)	1 (6)
	red zone		0 (0)	0 (0)	1 (9)	0 (0)
	edema		0 (0)	1 (7)	0 (0)	0 (0)
	nodule		0 (0)	2 (13)	2 (18)	2 (13)
lymph node	enlarged		0 (0)	1 (7)	1 (9)	1 (6)
spleen	enlarged		3 (25)	7 (47)	2 (18)	4 (25)
	deformed		0 (0)	0 (0)	0 (0)	1 (6)
	adhesion		0 (0)	1 (7)	1 (9)	0 (0)
forestomach	ulcer		0 (0)	2 (13)	0 (0)	0 (0)
gl stomach	ulcer		0 (0)	1 (7)	0 (0)	0 (0)
cecum	red zone		0 (0)	1 (7)	0 (0)	0 (0)
liver	pale		0 (0)	1 (7)	0 (0)	1 (6)
	nodule		0 (0)	1 (7)	0 (0)	2 (13)
	rough		0 (0)	1 (7)	0 (0)	0 (0)
	herniation		2 (17)	3 (20)	1 (9)	2 (13)
pancreas	nodule		0 (0)	0 (0)	1 (9)	1 (6)
kidney	white zone		0 (0)	2 (13)	0 (0)	0 (0)
	brown zone		0 (0)	0 (0)	0 (0)	1 (6)

STUDY NO. : 0328
 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		320 ppm		800 ppm		2000 ppm	
			12	(%)	15	(%)	11	(%)	16	(%)
kidney	hydronephrosis		0	(0)	0	(0)	1	(9)	1	(6)
urin bladd	red zone		0	(0)	2	(13)	0	(0)	1	(6)
	urine:marked retention		0	(0)	1	(7)	0	(0)	2	(13)
	fluid:red		0	(0)	0	(0)	0	(0)	1	(6)
pituitary	enlarged		3	(25)	3	(20)	1	(9)	2	(13)
	red zone		0	(0)	0	(0)	1	(9)	2	(13)
	nodule		0	(0)	2	(13)	0	(0)	1	(6)
adrenal	enlarged		2	(17)	1	(7)	1	(9)	0	(0)
ovary	enlarged		1	(8)	1	(7)	0	(0)	0	(0)
	cyst		0	(0)	0	(0)	0	(0)	1	(6)
uterus	enlarged		0	(0)	1	(7)	0	(0)	0	(0)
	nodule		1	(8)	2	(13)	3	(27)	3	(19)
	dilated lumen		0	(0)	1	(7)	0	(0)	0	(0)
	fluid:red		0	(0)	0	(0)	1	(9)	0	(0)
vagina	nodule		0	(0)	0	(0)	1	(9)	0	(0)
prep/cli gl	nodule		1	(8)	0	(0)	0	(0)	0	(0)
brain	red zone		0	(0)	1	(7)	0	(0)	1	(6)
	hemorrhage		0	(0)	1	(7)	0	(0)	1	(6)
	nodule		1	(8)	0	(0)	0	(0)	0	(0)
spinal cord	red zone		0	(0)	2	(13)	0	(0)	1	(6)
	hemorrhage		0	(0)	1	(7)	0	(0)	1	(6)
	nodule		0	(0)	1	(7)	0	(0)	0	(0)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 6

Organ	Findings	Group Name NO. of Animals	Control		320 ppm		800 ppm		2000 ppm	
			12	(%)	15	(%)	11	(%)	16	(%)
eye	white		0	(0)	1	(7)	0	(0)	0	(0)
Zymbal gl	nodule		1	(8)	0	(0)	0	(0)	0	(0)
peritoneum	nodule		0	(0)	1	(7)	2	(18)	1	(6)
	mass		1	(8)	0	(0)	0	(0)	0	(0)
retroperit	mass		0	(0)	0	(0)	1	(9)	0	(0)
abdominal c	mass		0	(0)	0	(0)	0	(0)	1	(6)
	ascites		0	(0)	1	(7)	0	(0)	4	(25)
thoracic ca	nodule		0	(0)	0	(0)	1	(9)	0	(0)
	pleural fluid		0	(0)	0	(0)	1	(9)	2	(13)
whole body	anemic		0	(0)	0	(0)	1	(9)	3	(19)

(HPT080)

BAIS 3

APPENDIX I 1

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

STUDY NO. : 0328
 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	40	384± 28	0.077± 0.015	2.769± 1.171	1.230± 0.085	1.453± 0.190	2.634± 0.221
320 ppm	44	360± 48*	0.083± 0.033	2.957± 1.333	1.204± 0.106	1.587± 0.562	2.802± 0.399
800 ppm	41	353± 22**	0.088± 0.075	2.659± 1.118	1.204± 0.094	1.423± 0.200	2.757± 0.299
2000 ppm	39	328± 25**	0.079± 0.040	3.137± 1.158	1.149± 0.086**	1.365± 0.079	2.853± 0.300**

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

Test of Dunnett

(HCL040)

BAIS 3

STUDY NO. : 0328
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	40	1.131±	0.594	10.394±	1.540	2.054±	0.047
320 ppm	44	1.642±	1.632	11.508±	2.020**	2.058±	0.059
800 ppm	41	1.479±	2.432	11.946±	1.759**	2.060±	0.048
2000 ppm	39	0.926±	0.289	12.361±	1.199**	2.082±	0.046

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

Test of Dunnett

(HCL040)

BAIS 3

APPENDIX I 2

ORGAN WEIGHT, ABSOLUTE : SUMMARY, RAT : FEMALE

(2-YEAR STUDY)

STUDY NO. : 0328
 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	38	248± 36	0.086± 0.047	0.143± 0.069	0.900± 0.075	1.021± 0.156	1.713± 0.138
320 ppm	35	238± 23	0.074± 0.008	0.288± 0.833	0.892± 0.104	1.022± 0.222	1.738± 0.133
800 ppm	39	234± 32	0.102± 0.182	0.159± 0.181	0.885± 0.104	0.986± 0.161	1.766± 0.123
2000 ppm	34	199± 26**	0.065± 0.007**	0.126± 0.016	0.833± 0.104*	0.926± 0.067**	1.670± 0.113

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

Test of Dunnett

(HCL040)

BAIS 3

STUDY NO. : 0328
 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	38	0.876±	1.770	6.317±	0.921	1.900±	0.105
320 ppm	35	0.763±	1.090	6.790±	0.930	1.874±	0.054
800 ppm	39	0.588±	0.467	7.267±	0.924**	1.890±	0.051
2000 ppm	34	0.482±	0.303**	7.086±	0.923**	1.890±	0.051

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

Test of Dunnett

(HCL040)

BAIS 3

APPENDIX J 1

ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : MALE

(2-YEAR STUDY)

STUDY NO. : 0328
 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	40	384± 28	0.020± 0.004	0.720± 0.301	0.321± 0.023	0.380± 0.057	0.690± 0.086
320 ppm	44	360± 48*	0.024± 0.010	0.822± 0.360	0.339± 0.040	0.460± 0.229**	0.799± 0.202**
800 ppm	41	353± 22**	0.025± 0.021*	0.755± 0.319	0.342± 0.028**	0.405± 0.072*	0.785± 0.120**
2000 ppm	39	328± 25**	0.024± 0.012**	0.954± 0.349**	0.352± 0.035**	0.417± 0.033**	0.873± 0.106**

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

Test of Dunnett

(HCL042)

BAIS 3

STUDY NO. : 0328
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	40	0.297± 0.167	2.716± 0.449	0.537± 0.037
320 ppm	44	0.492± 0.566	3.268± 0.848**	0.584± 0.096*
800 ppm	41	0.431± 0.750	3.397± 0.588**	0.585± 0.037**
2000 ppm	39	0.282± 0.089	3.778± 0.405**	0.638± 0.054**

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

Test of Dunnett

(HCL042)

BAIS 3

APPENDIX J 2

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

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

[illegible]

STUDY NO. : 0328
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	38	0.413± 1.066	2.583± 0.413	0.786± 0.143
320 ppm	35	0.333± 0.521	2.864± 0.415**	0.794± 0.083
800 ppm	39	0.262± 0.252	3.152± 0.502**	0.824± 0.121
2000 ppm	34	0.245± 0.162	3.572± 0.217**	0.967± 0.136**

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

Test of Dunnett

(HCL042)

BAIS 3

APPENDIX K 1

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : MALE : ALL ANIMALS

(2-YEAR STUDY)

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

Organ	Findings	Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<49>				<50>				<50>				<50>			
	ulcer		0	0	0	0	5	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)
	inflammation		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	fibrosis		1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(2)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	hyperplasia:epidermis		4	0	0	0	8	0	0	0	6	0	0	0	5	0	0	0
			(8)	(0)	(0)	(0)	(16)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	scab		0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	epidermal cyst		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)	(0)	(0)	(0)	(0)
subcutis			<50>				<50>				<50>				<50>			
	abscess		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Respiratory system}																		
nasal cavit			<50>				<50>				<50>				<50>			
	thrombus		2	0	0	0	3	0	0	0	1	0	0	0	2	0	0	0
			(4)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)

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

STUDY NO. : 0328
 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				320 ppm 50				800 ppm 50				2000 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>			
	cartilaginous metaplasia	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)
	eosinophilic change:olfactory epithelium	19	9	0	0	27	10	0	0	30	7	0	0	23	5	0	0	23	5	0	0
		(38)	(18)	(0)	(0)	(54)	(20)	(0)	(0)	(60)	(14)	(0)	(0)	(46)	(10)	(0)	(0)	(46)	(10)	(0)	(0)
	eosinophilic change:respiratory epithelium	16	2	0	0	23	0	0	0	19	0	0	0	24	6	0	0 *	24	6	0	0 *
		(32)	(4)	(0)	(0)	(46)	(0)	(0)	(0)	(38)	(0)	(0)	(0)	(48)	(12)	(0)	(0)	(48)	(12)	(0)	(0)
	inflammation:foreign body	12	0	0	0	16	0	0	0	13	1	0	0	17	2	0	0	17	2	0	0
		(24)	(0)	(0)	(0)	(32)	(0)	(0)	(0)	(26)	(2)	(0)	(0)	(34)	(4)	(0)	(0)	(34)	(4)	(0)	(0)
	necrosis:olfactory epithelium	0	0	1	0	1	0	0	0	3	0	0	0	1	0	0	0	1	0	0	0
		(0)	(0)	(2)	(0)	(2)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
lung		<50>				<50>				<50>				<50>				<50>			
	congestion	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
		(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	hemorrhage	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	osseous metaplasia	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)

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

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study				Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
lung		<50>				<50>				<50>				<50>							
	bronchiolar-alveolar cell hyperplasia	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	1 (2)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	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)	6 (12)	0 (0)	0 (0)	0 (0)	7 (14)	0 (0)	0 (0)	0 (0)	0 (0)	6 (12)	0 (0)	0 (0)	0 (0)	0 (0)		
	increased hematopoiesis	8 (16)	0 (0)	0 (0)	0 (0)	10 (20)	0 (0)	0 (0)	0 (0)	13 (26)	0 (0)	0 (0)	0 (0)	0 (0)	10 (20)	0 (0)	0 (0)	0 (0)	0 (0)		
	granulopoiesis:increased	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	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)		
lymph node		<50>				<50>				<50>				<50>							
	lymphadenitis	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)		
spleen		<50>				<50>				<50>				<50>							
	congestion	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)	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. : 0328
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				320 ppm 50				800 ppm 50				2000 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>			
	deposit of hemosiderin		29 (58)	4 (8)	2 (4)	0 (0)	28 (56)	2 (4)	0 (0)	0 (0)	34 (68)	5 (10)	0 (0)	0 (0)	37 (74)	3 (6)	0 (0)	1 (2)
	fibrosis		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)
	extramedullary hematopoiesis		2 (4)	1 (2)	0 (0)	1 (2)	5 (10)	0 (0)	2 (4)	0 (0)	3 (6)	0 (0)	1 (2)	1 (2)	5 (10)	0 (0)	2 (4)	0 (0)
{Circulatory system}																		
heart			<50>				<50>				<50>				<50>			
	thrombus		0 (0)	1 (2)	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)
	myocardial fibrosis		22 (44)	0 (0)	0 (0)	0 (0)	21 (42)	1 (2)	0 (0)	0 (0)	18 (36)	0 (0)	0 (0)	0 (0)	21 (42)	2 (4)	0 (0)	0 (0)
{Digestive system}																		
stomach			<50>				<50>				<49>				<50>			
	epidermal cyst		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	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. : 0328
 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 Grade	Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
stomach	ulcer:forestomach		<50>				<50>				<49>				<50>			
			1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia:forestomach		2	0	0	0	3	0	0	0	1	0	0	0	1	0	0	0
			(4)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	erosion:glandular stomach		3	0	0	0	2	0	0	0	3	0	0	0	4	0	0	0
			(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	ulcer:glandular stomach		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	fibrosis glandular stomach		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)
liver	herniation		<50>				<50>				<50>				<50>			
			2	0	0	0	3	0	0	0	6	0	0	0	4	0	0	0
			(4)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	angiectasis		0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	necrosis:zonal		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	necrosis:central		0	1	0	0	0	0	0	0	1	0	0	0	0	3	0	0
			(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(6)	(0)	(0)
	necrosis:focal		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)
	fatty change:central		0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)
	granulation		9	5	0	0	9	3	0	0	12	3	0	0	10	3	0	0
			(18)	(10)	(0)	(0)	(18)	(6)	(0)	(0)	(24)	(6)	(0)	(0)	(20)	(6)	(0)	(0)
	clear cell focus		5	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0
			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	acidophilic cell focus		14	0	0	0	11	0	0	0	6	0	0	0	14	4	0	0
			(28)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(28)	(8)	(0)	(0)
	basophilic cell focus		21	0	0	0	20	2	0	0	24	8	0	0 **	33	7	0	0 **
			(42)	(0)	(0)	(0)	(40)	(4)	(0)	(0)	(48)	(16)	(0)	(0)	(66)	(14)	(0)	(0)
	spongiosis hepatitis		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
< a > a : Number of animals examined at the site
b : 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. : 0328
 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 No. of Animals on Study Grade	Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	bile duct hyperplasia		43 (86)	6 (12)	0 (0)	0 (0)	39 (78)	8 (16)	0 (0)	0 (0)	46 (92)	4 (8)	0 (0)	0 (0)	47 (94)	0 (0)	0 (0)	0 * (0)
	cholangiofibrosis		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
pancreas			<50>				<50>				<50>				<50>			
	atrophy		4 (8)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)
	arteritis		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)	1 (2)	0 (0)	0 (0)
	islet cell hyperplasia		1 (2)	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)
	hyperplasia:acinar cell		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	cyst		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 : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0328
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 No. of Animals on Study Grade	Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	chronic nephropathy		26 (52)	15 (30)	4 (8)	1 (2)	6 (12)	27 (54)	14 (28)	2 ** (4)	2 (4)	10 (20)	34 (68)	4 ** (8)	1 (2)	5 (10)	32 (64)	11 ** (22)
	hydronephrosis		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)
	papillary necrosis		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)	0 (0)	0 (0)
	mineralization:cortico-medullary junction		1 (2)	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)
	mineralization:papilla		0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	46 (92)	1 (2)	0 (0)	0 ** (0)	31 (62)	17 (34)	0 (0)	0 ** (0)
	urothelial hyperplasia:pelvis		1 (2)	0 (0)	0 (0)	0 (0)	8 (16)	0 (0)	0 (0)	0 * (0)	34 (68)	2 (4)	0 (0)	0 ** (0)	27 (54)	12 (24)	0 (0)	0 ** (0)
	atypical tubule 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)	2 (4)	0 (0)	0 (0)	0 (0)
urin bladd			<50>				<50>				<50>				<50>			
	transitional 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)	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. : 0328
 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 No. of Animals on Study Grade	Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
pituitary	hyperplasia		<50>				<50>				<50>				<50>			
		15 (30)	1 (2)	0 (0)	0 (0)	16 (32)	0 (0)	0 (0)	0 (0)	11 (22)	0 (0)	0 (0)	0 (0)	16 (32)	0 (0)	0 (0)	0 (0)	
	Rathke pouch	2 (4)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	
thyroid	C-cell hyperplasia		<50>				<50>				<50>				<50>			
		7 (14)	1 (2)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	5 (10)	1 (2)	0 (0)	0 (0)	
adrenal	hyperplasia:medulla		<49>				<50>				<50>				<50>			
		1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	
	focal fatty change:cortex	4 (8)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	5 (10)	0 (0)	0 (0)	0 (0)	3 (6)	0 (0)	0 (0)	0 (0)	
{Reproductive system}																		
testis	atrophy		<50>				<50>				<50>				<50>			
		42 (84)	2 (4)	0 (0)	0 (0)	40 (80)	4 (8)	0 (0)	0 (0)	40 (80)	6 (12)	0 (0)	0 (0)	34 (68)	5 (10)	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. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
testis	arteritis		<50>				<50>				<50>				<50>			
			5	0	0	0	5	0	0	0	5	0	0	0	1	0	0	0
			(10)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	interstitial cell hyperplasia		<50>				<50>				<50>				<50>			
			4	0	0	0	4	0	0	0	2	0	0	0	2	0	0	0
			(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
epididymis	spermatogenic granuloma		<50>				<50>				<50>				<50>			
			0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
semin ves	inflammation		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
prostate	inflammation		<50>				<50>				<50>				<50>			
			18	4	0	0	10	3	0	0	9	1	0	0 *	9	0	1	0 *
			(36)	(8)	(0)	(0)	(20)	(6)	(0)	(0)	(18)	(2)	(0)	(0)	(18)	(0)	(2)	(0)
	hyperplasia		<50>				<50>				<50>				<50>			
			13	0	0	0	10	2	0	0	8	0	0	0	9	0	0	0
			(26)	(0)	(0)	(0)	(20)	(4)	(0)	(0)	(16)	(0)	(0)	(0)	(18)	(0)	(0)	(0)
mammary gl	galactoceles		<50>				<50>				<50>				<50>			
			4	0	0	0	5	0	0	0	0	1	0	0	2	0	0	0
			(8)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(2)	(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. : 0328
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 No. of Animals on Study Grade	Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Nervous system}																		
brain	hemorrhage		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
spinal cord	hemorrhage		<50>				<50>				<50>				<49>			
			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)
{Special sense organs/appendage}																		
eye	cataract		<50>				<50>				<50>				<50>			
			4	0	0	0	1	0	0	0	4	0	0	0	8	0	0	0
			(8)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(16)	(0)	(0)	(0)
	retinal atrophy		3	0	0	0	1	0	0	0	4	0	0	0	7	0	0	0
			(6)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)
	mineralization:cornea		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)
Harder gl	atrophy		<50>				<50>				<50>				<50>			
			1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(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. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 12

Organ	Findings	Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Special sense organs/appendage}

Harder gl

lymphocytic infiltration

<50>

9000

(18)(0)(0)(0)

<50>

8000

(16)(0)(0)(0)

<50>

11000

(22)(0)(0)(0)

<50>

13000

(26)(0)(0)(0)

{Body cavities}

peritoneum

mesothelial hyperplasia

<50>

0000

(0)(0)(0)(0)

<50>

0000

(0)(0)(0)(0)

<50>

1000

(2)(0)(0)(0)

<50>

0000

(0)(0)(0)(0)

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

(HPT150)

BAIS3

APPENDIX K 2

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : FEMALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 13

		Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Integumentary system/appandage}																		
skin/app			<50>				<50>				<50>				<50>			
	ulcer		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)
	fibrosis		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)
	hyperplasia:epidermis		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)
	scab		0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
{Respiratory system}																		
nasal cavit			<50>				<50>				<50>				<50>			
	thrombus		2	0	0	0	4	0	0	0	3	0	0	0	2	0	0	0
			(4)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	cartilaginous metaplasia		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	eosinophilic change:olfactory epithelium		23	19	1	0	20	21	0	0	19	22	0	0	29	8	0	0 *
			(46)	(38)	(2)	(0)	(40)	(42)	(0)	(0)	(38)	(44)	(0)	(0)	(58)	(16)	(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. : 0328
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 No. of Animals on Study Grade				Control 50				320 ppm 50				800 ppm 50				2000 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>			
	eosinophilic change:respiratory epithelium	28	0	0	0	28	0	0	0	22	0	0	0	21	0	0	0	21	0	0	0
		(56)	(0)	(0)	(0)	(56)	(0)	(0)	(0)	(44)	(0)	(0)	(0)	(42)	(0)	(0)	(0)	(42)	(0)	(0)	(0)
		<50>				<50>				<50>				<50>				<50>			
	inflammation:foreign body	2	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	2	0	0	0
		(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
lung		<50>				<50>				<50>				<50>				<50>			
	congestion	0	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)	(2)	(0)	(0)	(0)
		<50>				<50>				<50>				<50>				<50>			
	necrosis:zonal	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
		<50>				<50>				<50>				<50>				<50>			
	accumulation of foamy cells	1	0	0	0	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)	(2)	(0)	(0)	(0)
		<50>				<50>				<50>				<50>				<50>			
	bronchiolar-alveolar cell hyperplasia	2	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0
		(4)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)
{Hematopoietic system}																					
bone marrow		<50>				<50>				<50>				<50>				<50>			
	granulation	14	0	0	0	11	0	0	0	11	1	0	0	10	0	0	0	20	0	0	0
		(28)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(22)	(2)	(0)	(0)	(20)	(0)	(0)	(0)	(20)	(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. : 0328
 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				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)																		
bone marrow			<50>				<50>				<50>				<50>			
	increased hematopoiesis		5 (10)	0 (0)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	14 (28)	0 (0)	0 (0)	0 (0)
	granulopoiesis:increased		1 (2)	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)
spleen			<50>				<50>				<50>				<50>			
	deposit of hemosiderin		32 (64)	9 (18)	0 (0)	0 (0)	30 (60)	3 (6)	0 (0)	0 (0)	32 (64)	6 (12)	1 (2)	0 (0)	20 (40)	16 (32)	0 (0)	0 (0)
	fibrosis		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)
	extramedullary hematopoiesis		4 (8)	1 (2)	2 (4)	0 (0)	5 (10)	1 (2)	4 (8)	0 (0)	5 (10)	4 (8)	2 (4)	0 (0)	3 (6)	4 (8)	5 (10)	0 (0)
(Circulatory system)																		
heart			<50>				<50>				<50>				<50>			
	thrombus		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)
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. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 16

		Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Circulatory system}																		
heart			<50>				<50>				<50>				<50>			
	mineralization		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	myocardial fibrosis		5	0	0	0	3	0	0	0	5	0	0	0	4	0	0	0
			(10)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
<hr/>																		
{Digestive system}																		
tongue			<50>				<50>				<50>				<50>			
	fibrosis		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)	(0)	(0)	(0)	(0)	(0)
stomach			<50>				<50>				<50>				<50>			
	mineralization		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)
	ulcer:forestomach		1	2	0	0	1	1	0	0	0	2	0	0	1	0	0	0
			(2)	(4)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(2)	(0)	(0)	(0)
	hyperplasia:forestomach		3	0	0	0	4	0	0	0	3	0	0	0	2	0	0	0
			(6)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(6)	(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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 17

Organ	Findings	Group Name No. of Animals on Study Grade				Control 50				320 ppm 50				800 ppm 50				2000 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>			
	erosion:glandular stomach	1 (2)	1 (2)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	1 (2)	0 (0)	0 (0)
	ulcer:glandular stomach	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)	0 (0)	0 (0)	0 (0)
liver		<50>				<50>				<50>				<50>				<50>			
	herniation	5 (10)	0 (0)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)
	angiectasis	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	necrosis:zonal	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)	2 (4)	0 (0)	0 (0)	1 (2)	1 (2)	0 (0)	0 (0)	2 (4)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 * (0)
	necrosis:focal	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)
	lymphocytic infiltration	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 18

		Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	granulation		22 (44)	5 (10)	0 (0)	0 (0)	17 (34)	4 (8)	0 (0)	0 (0)	15 (30)	3 (6)	0 (0)	0 (0)	15 (30)	2 (4)	0 (0)	0 (0)
	clear cell focus		2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)
	acidophilic cell focus		2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	5 (10)	3 (6)	0 (0)	0 (0)
	basophilic cell focus		23 (46)	3 (6)	0 (0)	0 (0)	18 (36)	2 (4)	0 (0)	0 (0)	16 (32)	2 (4)	0 (0)	0 (0)	21 (42)	3 (6)	1 (2)	0 (0)
	bile duct hyperplasia		17 (34)	0 (0)	0 (0)	0 (0)	12 (24)	0 (0)	0 (0)	0 (0)	14 (28)	0 (0)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)
pancreas			<50>				<50>				<50>				<50>			
	atrophy		1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	3 (6)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
	islet cell hyperplasia		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)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	infarct		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)

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. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 19

Organ	Findings	Group Name	Control				320 ppm				800 ppm				2000 ppm				
		No. of Animals on Study	50				50				50				50				
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
{Urinary system}																			
kidney	cyst		<50>				<50>				<50>				<50>				
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	inflammatory infiltration		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	chronic nephropathy		22	2	0	0	21	0	2	0	28	2	1	1	26	2	0	0	
			(44)	(4)	(0)	(0)	(42)	(0)	(4)	(0)	(56)	(4)	(2)	(2)	(52)	(4)	(0)	(0)	
	hydronephrosis		0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	
papillary necrosis		0	0	0	0	1	0	0	0	1	0	0	0	4	1	0	0		
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(8)	(2)	(0)	(0)		
mineralization:cortico-medullary junction		5	0	0	0	7	0	0	0	6	0	0	0	3	0	0	0		
		(10)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(6)	(0)	(0)	(0)		
mineralization:papilla		9	0	0	0	9	0	0	0	9	0	0	0	17	0	0	0		
		(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(34)	(0)	(0)	(0)		
urothelial hyperplasia:pelvis		10	0	0	0	5	0	0	0	15	0	0	0	6	0	0	0		
		(20)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(30)	(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		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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 20

		Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	atypical tubule hyperplasia		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)
	necrosis:cortex		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)
{Endocrine system}																		
pituitary			<50>				<50>				<50>				<50>			
	cyst		9 (18)	0 (0)	0 (0)	0 (0)	13 (26)	0 (0)	0 (0)	0 (0)	11 (22)	0 (0)	0 (0)	0 (0)	10 (20)	1 (2)	0 (0)	0 (0)
	hyperplasia		9 (18)	0 (0)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	8 (16)	0 (0)	0 (0)	0 (0)
	Rathke pouch		1 (2)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
thyroid			<49>				<50>				<50>				<49>			
	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)
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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 21

		Group Name No. of Animals on Study Grade	Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
Organ	Findings		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
thyroid			<49>				<50>				<50>				<49>			
	C-cell hyperplasia		4	0	0	0	5	0	0	0	6	0	0	0	2	1	0	0
			(8)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(4)	(2)	(0)	(0)
parathyroid			<50>				<50>				<50>				<50>			
	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)
adrenal			<50>				<50>				<50>				<50>			
	hyperplasia:cortical 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)
	hyperplasia:medulla		1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
	focal fatty change:cortex		3	1	0	0	4	0	0	0	7	0	0	0	5	1	0	0
		(6)	(2)	(0)	(0)	(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(10)	(2)	(0)	(0)	
	necrosis:cortex		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)
{Reproductive system}																		
ovary			<50>				<49>				<50>				<50>			
	thrombus		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)	(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. : 0328
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				320 ppm 50				800 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
ovary	cyst		<50>				<49>				<50>				<50>			
			1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
			(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)
uterus	hyperplasia:epithelium		<49>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	cystic endometrial hyperplasia		2	0	0	0	4	0	0	0	3	0	0	0	2	0	0	0
			(4)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
mammary gl	galactoceles		<50>				<50>				<50>				<50>			
			7	0	0	0	7	0	0	0	4	0	0	0	6	0	0	0
			(14)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(12)	(0)	(0)	(0)
{Special sense organs/appendage}																		
eye	cataract		<50>				<50>				<50>				<50>			
			6	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0 *
			(12)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	retinal atrophy		6	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0 *
			(12)	(0)	(0)	(0)	(6)	(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 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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 23

		Control 50				320 ppm 50				800 ppm 50				2000 ppm 50			
Group Name No. of Animals on Study		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Grade		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Organ	Findings																
{Special sense organs/appendage}																	
eye		<50>				<50>				<50>				<50>			
	keratitis	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)
Harder gl		<50>				<50>				<50>				<50>			
	atrophy	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0
		(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	lymphocytic infiltration	17	0	0	0	17	0	0	0	17	0	0	0	15	0	0	0
		(34)	(0)	(0)	(0)	(34)	(0)	(0)	(0)	(34)	(0)	(0)	(0)	(30)	(0)	(0)	(0)
{Musculoskeletal system}																	
muscle		<50>				<50>				<50>				<50>			
	mineralization	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)
bone		<50>				<50>				<50>				<50>			
	osteosclerosis	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)	(4)	(0)	(0)	(0)
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																	
< a >		a : Number of animals examined at the site															
b		b : Number of animals with lesion															
(c)		c : b / a * 100															
Significant difference :		* : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square															

(HPT150)

BAIS3

APPENDIX K 3

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : MALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 1

Organ_____	Findings_____	Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	40				44				41				39			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<40>				<44>				<41>				<39>			
	ulcer		0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	fibrosis		1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(3)	(3)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia:epidermis		4	0	0	0	8	0	0	0	6	0	0	0	5	0	0	0
			(10)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(13)	(0)	(0)	(0)
	scab		0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
	epidermal cyst		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)
subcutis			<40>				<44>				<41>				<39>			
	abscess		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Respiratory system}																		
nasal cavit			<40>				<44>				<41>				<39>			
	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)

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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 2

Organ	Findings	Control No. of Animals on Study Grade				320 ppm 44				800 ppm 41				2000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																	
nasal cavit		<40>				<44>				<41>				<39>			
	eosinophilic change:olfactory epithelium	18	9	0	0	25	9	0	0	28	5	0	0	21	5	0	0
		(45)	(23)	(0)	(0)	(57)	(20)	(0)	(0)	(68)	(12)	(0)	(0)	(54)	(13)	(0)	(0)
	eosinophilic change:respiratory epithelium	13	2	0	0	20	0	0	0	14	0	0	0	24	6	0	0 **
		(33)	(5)	(0)	(0)	(45)	(0)	(0)	(0)	(34)	(0)	(0)	(0)	(62)	(15)	(0)	(0)
	inflammation:foreign body	11	0	0	0	15	0	0	0	9	1	0	0	15	1	0	0
		(28)	(0)	(0)	(0)	(34)	(0)	(0)	(0)	(22)	(2)	(0)	(0)	(38)	(3)	(0)	(0)
	necrosis:olfactory epithelium	0	0	1	0	1	0	0	0	3	0	0	0	1	0	0	0
		(0)	(0)	(3)	(0)	(2)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
lung		<40>				<44>				<41>				<39>			
	hemorrhage	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
	osseous metaplasia	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)
	bronchiolar-alveolar cell hyperplasia	0	0	0	0	2	1	0	0	0	0	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(5)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
{Hematopoietic system}																	
bone marrow		<40>				<44>				<41>				<39>			
	granulation	4	0	0	0	6	0	0	0	7	0	0	0	6	0	0	0
		(10)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(15)	(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. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 3

Organ	Findings	Control No. of Animals on Study Grade				320 ppm 44				800 ppm 41				2000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																	
bone marrow		<40>				<44>				<41>				<39>			
	increased hematopoiesis	8	0	0	0	8	0	0	0	9	0	0	0	7	0	0	0
		(20)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(18)	(0)	(0)	(0)
	granulopoiesis:increased	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)	(0)	(0)	(0)	(0)
lymph node		<40>				<44>				<41>				<39>			
	lymphadenitis	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)
spleen		<40>				<44>				<41>				<39>			
	congestion	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	deposit of hemosiderin	28	1	0	0	27	0	0	0	34	0	0	0	35	0	0	0
		(70)	(3)	(0)	(0)	(61)	(0)	(0)	(0)	(83)	(0)	(0)	(0)	(90)	(0)	(0)	(0)
	fibrosis	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(5)	(0)	(0)	(0)
	extramedullary hematopoiesis	2	1	0	0	4	0	1	0	2	0	0	1	5	0	1	0
		(5)	(3)	(0)	(0)	(9)	(0)	(2)	(0)	(5)	(0)	(0)	(2)	(13)	(0)	(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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 4

Organ	Findings	Control No. of Animals on Study Grade				320 ppm 44				800 ppm 41				2000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																	
heart		<40>				<44>				<41>				<39>			
	myocardial fibrosis	18	0	0	0	18	1	0	0	13	0	0	0	16	0	0	0
		(45)	(0)	(0)	(0)	(41)	(2)	(0)	(0)	(32)	(0)	(0)	(0)	(41)	(0)	(0)	(0)
{Digestive system}																	
stomach		<40>				<44>				<40>				<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)
	ulcer: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)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia:forestomach	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	erosion:glandular stomach	3	0	0	0	1	0	0	0	3	0	0	0	2	0	0	0
		(8)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
liver		<40>				<44>				<41>				<39>			
	herniation	2	0	0	0	2	0	0	0	6	0	0	0	3	0	0	0
		(5)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(8)	(0)	(0)	(0)

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

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 5

Organ_____	Findings_____	Group Name	Control				320 ppm				800 ppm				2000 ppm				
		No. of Animals on Study	40				44				41				39				
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
<hr/>																			
{Digestive system}																			
liver			<40>				<44>				<41>				<39>				
	angiectasis		0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	
	necrosis:zonal		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	fatty change:central		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)	(3)	(0)	
	granulation		8	4	0	0	9	3	0	0	12	3	0	0	10	3	0	0	0
			(20)	(10)	(0)	(0)	(20)	(7)	(0)	(0)	(29)	(7)	(0)	(0)	(26)	(8)	(0)	(0)	
clear cell focus		4	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	0	
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(10)	(0)	(0)	(0)		
acidophilic cell focus		14	0	0	0	11	0	0	0	6	0	0	0	13	4	0	0	0	
		(35)	(0)	(0)	(0)	(25)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(33)	(10)	(0)	(0)		
basophilic cell focus		19	0	0	0	20	2	0	0	21	8	0	0 **	26	6	0	0 **	0	
		(48)	(0)	(0)	(0)	(45)	(5)	(0)	(0)	(51)	(20)	(0)	(0)	(67)	(15)	(0)	(0)		
spongiosis hepatitis		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)		

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. : 0328
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 40				320 ppm 44				800 ppm 41				2000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																					
liver		<40>				<44>				<41>				<39>							
	bile duct hyperplasia	34 (85)	6 (15)	0 (0)	0 (0)	35 (80)	8 (18)	0 (0)	0 (0)	40 (98)	1 (2)	0 (0)	0 (0)	38 (97)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 *
	cholangiofibrosis	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)
pancreas		<40>				<44>				<41>				<39>							
	atrophy	4 (10)	0 (0)	0 (0)	0 (0)	4 (9)	0 (0)	0 (0)	0 (0)	3 (7)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	arteritis	0 (0)	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)	0 (0)	0 (0)	0 (0)
	islet 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)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	hyperplasia:acinar cell	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
{Urinary system}																					
kidney		<40>				<44>				<41>				<39>							
	cyst	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)	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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 7

Organ_____	Findings_____	Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	40				44				41				39			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Urinary system}																		
kidney			<40>				<44>				<41>				<39>			
	chronic nephropathy		21	15	3	1	6	24	13	1 **	1	7	30	3 **	0	1	27	10 **
			(53)	(38)	(8)	(3)	(14)	(55)	(30)	(2)	(2)	(17)	(73)	(7)	(0)	(3)	(69)	(26)
	mineralization:cortico-medullary junction		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)
	mineralization:papilla		0	0	0	0	2	0	0	0	37	1	0	0 **	25	13	0	0 **
			(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(90)	(2)	(0)	(0)	(64)	(33)	(0)	(0)
	urothelial hyperplasia:pelvis		1	0	0	0	7	0	0	0	29	2	0	0 **	23	12	0	0 **
			(3)	(0)	(0)	(0)	(16)	(0)	(0)	(0)	(71)	(5)	(0)	(0)	(59)	(31)	(0)	(0)
	atypical tubule hyperplasia		0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
urin bladd			<40>				<44>				<41>				<39>			
	transitional 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)
<hr/>																		
{Endocrine system}																		
pituitary			<40>				<44>				<41>				<39>			
	hyperplasia		15	1	0	0	15	0	0	0	10	0	0	0	16	0	0	0
		(38)	(3)	(0)	(0)	(34)	(0)	(0)	(0)	(24)	(0)	(0)	(0)	(41)	(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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 8

		Group Name No. of Animals on Study Grade	Control 40				320 ppm 44				800 ppm 41				2000 ppm 39			
Organ_____	Findings_____		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
<hr/>																		
{Endocrine system}																		
pituitary			<40>				<44>				<41>				<39>			
	Rathke pouch		2 (5)	0 (0)	0 (0)	0 (0)	4 (9)	0 (0)	0 (0)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)
thyroid			<40>				<44>				<41>				<39>			
	C-cell hyperplasia		5 (13)	1 (3)	0 (0)	0 (0)	9 (20)	0 (0)	0 (0)	0 (0)	9 (22)	0 (0)	0 (0)	0 (0)	5 (13)	1 (3)	0 (0)	0 (0)
adrenal			<40>				<44>				<41>				<39>			
	hyperplasia:medulla		1 (3)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)
	focal fatty change:cortex		4 (10)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	3 (8)	0 (0)	0 (0)	0 (0)
<hr/>																		
{Reproductive system}																		
testis			<40>				<44>				<41>				<39>			
	atrophy		37 (93)	1 (3)	0 (0)	0 (0)	37 (84)	4 (9)	0 (0)	0 (0)	36 (88)	4 (10)	0 (0)	0 (0)	29 (74)	2 (5)	0 (0)	0 (0)
	arteritis		5 (13)	0 (0)	0 (0)	0 (0)	5 (11)	0 (0)	0 (0)	0 (0)	5 (12)	0 (0)	0 (0)	0 (0)	1 (3)	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. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 9

		Group Name No. of Animals on Study Grade	Control 40				320 ppm 44				800 ppm 41				2000 ppm 39			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Reproductive system}																		
testis			<40>				<44>				<41>				<39>			
	interstitial cell hyperplasia		2 (5)	0 (0)	0 (0)	0 (0)	3 (7)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)
prostate			<40>				<44>				<41>				<39>			
	inflammation		17 (43)	2 (5)	0 (0)	0 (0)	10 (23)	2 (5)	0 (0)	0 (0)	8 (20)	0 (0)	0 (0)	0 (0)	7 (18)	0 (0)	0 (0)	0 (0)
	hyperplasia		13 (33)	0 (0)	0 (0)	0 (0)	10 (23)	2 (5)	0 (0)	0 (0)	7 (17)	0 (0)	0 (0)	0 (0)	8 (21)	0 (0)	0 (0)	0 (0)
mammary gl			<40>				<44>				<41>				<39>			
	galactoceles		3 (8)	0 (0)	0 (0)	0 (0)	4 (9)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)
{Special sense organs/appendage}																		
eye			<40>				<44>				<41>				<39>			
	cataract		3 (8)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	7 (18)	0 (0)	0 (0)	0 (0)
	retinal atrophy		3 (8)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	7 (18)	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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 10

Organ_____	Findings_____	Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	40				44				41				39			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
eye	mineralization:cornea		<40>				<44>				<41>				<39>			
		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)	(3)	(0)	(0)	(0)	(0)	
Harder gl	atrophy		<40>				<44>				<41>				<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)
	lymphocytic infiltration		9	0	0	0	7	0	0	0	11	0	0	0	13	0	0	0
		(23)	(0)	(0)	(0)	(16)	(0)	(0)	(0)	(27)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(0)
{Body cavities}																		
peritoneum	mesothelial hyperplasia		<40>				<44>				<41>				<39>			
		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)	(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

(HPT150)

BAIS3

APPENDIX K 4

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : FEMALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 11

Organ	Findings	Group Name No. of Animals on Study Grade	Control 38				320 ppm 35				800 ppm 39				2000 ppm 34			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<38>				<35>				<39>				<34>			
	ulcer		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)
	fibrosis		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)	(0)	(0)	(0)	(0)
	hyperplasia:epidermis		0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	scab		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)	(6)	(0)	(0)	(0)
{Respiratory system}																		
nasal cavit			<38>				<35>				<39>				<34>			
	thrombus		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)
	eosinophilic change:olfactory epithelium		17	19	0	0	14	20	0	0	16	21	0	0	25	7	0	0 *
			(45)	(50)	(0)	(0)	(40)	(57)	(0)	(0)	(41)	(54)	(0)	(0)	(74)	(21)	(0)	(0)
	eosinophilic change:respiratory epithelium		24	0	0	0	23	0	0	0	20	0	0	0	20	0	0	0
			(63)	(0)	(0)	(0)	(66)	(0)	(0)	(0)	(51)	(0)	(0)	(0)	(59)	(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

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 12

		Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	38				35				39				34			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			<38>				<35>				<39>				<34>			
	inflammation:foreign body		2	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0
			(5)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
lung			<38>				<35>				<39>				<34>			
	accumulation of foamy cells		1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
	bronchiolar-alveolar cell hyperplasia		2	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0
			(5)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(3)	(0)	(0)
{Hematopoietic system}																		
bone marrow			<38>				<35>				<39>				<34>			
	granulation		14	0	0	0	10	0	0	0	11	1	0	0	9	0	0	0
			(37)	(0)	(0)	(0)	(29)	(0)	(0)	(0)	(28)	(3)	(0)	(0)	(26)	(0)	(0)	(0)
	increased hematopoiesis		1	0	0	0	4	0	0	0	4	0	0	0	3	0	0	0
			(3)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	granulopoiesis:increased		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 ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 13

		Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	38				35				39				34			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen			<38>				<35>				<39>				<34>			
	deposit of hemosiderin		31 (82)	4 (11)	0 (0)	0 (0)	28 (80)	2 (6)	0 (0)	0 (0)	31 (79)	5 (13)	0 (0)	0 (0)	17 (50)	13 (38)	0 (0)	0 * (0)
	extramedullary hematopoiesis		4 (11)	1 (3)	0 (0)	0 (0)	5 (14)	1 (3)	0 (0)	0 (0)	5 (13)	0 (0)	0 (0)	0 (0)	3 (9)	1 (3)	1 (3)	0 (0)
{Circulatory system}																		
heart			<38>				<35>				<39>				<34>			
	myocardial fibrosis		4 (11)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)
{Digestive system}																		
stomach			<38>				<35>				<39>				<34>			
	ulcer:forestomach		0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	hyperplasia:forestomach		2 (5)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	2 (5)	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. : 0328
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				320 ppm 35				800 ppm 39				2000 ppm 34			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																	
stomach		<38>				<35>				<39>				<34>			
	erosion:glandular stomach	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)
liver		<38>				<35>				<39>				<34>			
	herniation	3	0	0	0	6	0	0	0	3	0	0	0	2	0	0	0
		(8)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	angiectasis	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:focal	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)
	lymphocytic infiltration	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	granulation	22	5	0	0	17	4	0	0	15	3	0	0	15	2	0	0
		(58)	(13)	(0)	(0)	(49)	(11)	(0)	(0)	(38)	(8)	(0)	(0)	(44)	(6)	(0)	(0)
	clear cell focus	2	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0
		(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(12)	(0)	(0)	(0)
	acidophilic cell focus	2	0	0	0	0	1	0	0	1	0	0	0	5	3	0	0
		(5)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(3)	(0)	(0)	(0)	(15)	(9)	(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. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 15

		Group Name No. of Animals on Study				Control 38				320 ppm 35				800 ppm 39				2000 ppm 34			
Organ	Findings	Grade																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																					
liver		<38>				<35>				<39>				<34>							
	basophilic cell focus	22	3	0	0	16	2	0	0	16	2	0	0	20	3	0	0	(58)	(8)	(0)	(0)
		(58)	(8)	(0)	(0)	(46)	(6)	(0)	(0)	(41)	(5)	(0)	(0)	(59)	(9)	(0)	(0)				
	bile duct hyperplasia	14	0	0	0	8	0	0	0	12	0	0	0	8	0	0	0	(37)	(0)	(0)	(0)
		(37)	(0)	(0)	(0)	(23)	(0)	(0)	(0)	(31)	(0)	(0)	(0)	(24)	(0)	(0)	(0)				
pancreas		<38>				<35>				<39>				<34>							
	atrophy	1	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	(3)	(0)	(0)	(0)
		(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(3)	(0)	(0)	(0)				
	islet cell hyperplasia	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	(0)	(0)	(0)	(0)
		(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)				
{Urinary system}																					
kidney		<38>				<35>				<39>				<34>							
	infarct	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)				
	cyst	1	0	0	0	0	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)	(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. : 0328
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 38				320 ppm 35				800 ppm 39				2000 ppm 34			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<38>				<35>				<39>				<34>			
	chronic nephropathy		20	2	0	0	19	0	2	0	28	2	0	1	21	2	0	0
			(53)	(5)	(0)	(0)	(54)	(0)	(6)	(0)	(72)	(5)	(0)	(3)	(62)	(6)	(0)	(0)
	papillary necrosis		0	0	0	0	0	0	0	0	1	0	0	0	3	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(9)	(3)	(0)	(0)
	mineralization:cortico-medullary junction		3	0	0	0	6	0	0	0	6	0	0	0	2	0	0	0
			(8)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	mineralization:papilla		6	0	0	0	7	0	0	0	6	0	0	0	12	0	0	0
			(16)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(35)	(0)	(0)	(0)
	urothelial hyperplasia:pelvis		8	0	0	0	4	0	0	0	15	0	0	0	4	0	0	0
			(21)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(38)	(0)	(0)	(0)	(12)	(0)	(0)	(0)
	atypical tubule hyperplasia		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)
{Endocrine system}																		
pituitary			<38>				<35>				<39>				<34>			
	cyst		8	0	0	0	12	0	0	0	10	0	0	0	8	1	0	0
			(21)	(0)	(0)	(0)	(34)	(0)	(0)	(0)	(26)	(0)	(0)	(0)	(24)	(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. : 0328
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 Grade				Control 38				320 ppm 35				800 ppm 39				2000 ppm 34			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																					
pituitary		<38>				<35>				<39>				<34>							
	hyperplasia	9 (24)	0 (0)	0 (0)	0 (0)	9 (26)	0 (0)	0 (0)	0 (0)	8 (21)	0 (0)	0 (0)	0 (0)	7 (21)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Rathke pouch	1 (3)	0 (0)	0 (0)	0 (0)	3 (9)	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)
thyroid		<37>				<35>				<39>				<34>							
	ultimibranchial 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 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	C-cell hyperplasia	4 (11)	0 (0)	0 (0)	0 (0)	4 (11)	0 (0)	0 (0)	0 (0)	6 (15)	0 (0)	0 (0)	0 (0)	1 (3)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
parathyroid		<38>				<35>				<39>				<34>							
	hyperplasia	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)	0 (0)	0 (0)	0 (0)	0 (0)
adrenal		<38>				<35>				<39>				<34>							
	hyperplasia:cortical cell	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	hyperplasia:medulla	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	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. : 0328
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 38				320 ppm 35				800 ppm 39				2000 ppm 34			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal	focal fatty change:cortex		<38>				<35>				<39>				<34>			
			3	1	0	0	3	0	0	0	6	0	0	0	4	1	0	0
			(8)	(3)	(0)	(0)	(9)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(12)	(3)	(0)	(0)
{Reproductive system}																		
ovary	thrombus		<38>				<34>				<39>				<34>			
			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)	(0)	(0)	(0)
	cyst		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)
uterus	hyperplasia:epithelium		<37>				<35>				<39>				<34>			
			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)
	cystic endometrial hyperplasia		1	0	0	0	4	0	0	0	3	0	0	0	2	0	0	0
			(3)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
mammary gl	galactoceles		<38>				<35>				<39>				<34>			
			6	0	0	0	3	0	0	0	3	0	0	0	3	0	0	0
			(16)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(8)	(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
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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 19

		Group Name No. of Animals on Study Grade				Control 38				320 ppm 35				800 ppm 39				2000 ppm 34			
Organ_____	Findings_____	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)				
{Special sense organs/appendage}																					
eye		<38>				<35>				<39>				<34>							
	cataract	6 (16)	0 (0)	0 (0)	0 (0)	3 (9)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 * (0)			
	retinal atrophy	6 (16)	0 (0)	0 (0)	0 (0)	2 (6)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 * (0)			
Harder gl		<38>				<35>				<39>				<34>							
	atrophy	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)			
	lymphocytic infiltration	13 (34)	0 (0)	0 (0)	0 (0)	12 (34)	0 (0)	0 (0)	0 (0)	16 (41)	0 (0)	0 (0)	0 (0)	0 (0)	14 (41)	0 (0)	0 (0)	0 (0)			
{Musculoskeletal system}																					
bone		<38>				<35>				<39>				<34>							
	osteosclerosis	1 (3)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	2 (6)	0 (0)	0 (0)	0 (0)			

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

APPENDIX K 5

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : MALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
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 10				320 ppm 6				800 ppm 9				2000 ppm 11			
		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		< 9>				< 6>				< 9>				<11>							
	inflammation	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)	(0)	(0)	(0)	(0)
	epidermal cyst	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Respiratory system}																					
nasal cavit		<10>				< 6>				< 9>				<11>							
	thrombus	2	0	0	0	2	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0
		(20)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)
	cartilaginous metaplasia	1	0	0	0	0	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)	(0)	(0)	(0)	(0)
	eosinophilic change:olfactory epithelium	1	0	0	0	2	1	0	0	2	2	0	0	2	0	0	0	2	0	0	0
		(10)	(0)	(0)	(0)	(33)	(17)	(0)	(0)	(22)	(22)	(0)	(0)	(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)
	eosinophilic change:respiratory epithelium	3	0	0	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
		(30)	(0)	(0)	(0)	(50)	(0)	(0)	(0)	(56)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammation:foreign body	1	0	0	0	1	0	0	0	4	0	0	0	2	1	0	0	2	1	0	0
		(10)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(44)	(0)	(0)	(0)	(18)	(9)	(0)	(0)	(18)	(9)	(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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 2

		Group Name No. of Animals on Study Grade	Control 10				320 ppm 6				800 ppm 9				2000 ppm 11			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
(Respiratory system)																		
lung			<10>				<6>				<9>				<11>			
	congestion		1 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (18)	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)	2 (22)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
(Hematopoietic system)																		
bone marrow			<10>				<6>				<9>				<11>			
	increased hematopoiesis		0 (0)	0 (0)	0 (0)	0 (0)	2 (33)	0 (0)	0 (0)	0 (0)	4 (44)	0 (0)	0 (0)	0 (0)	3 (27)	0 (0)	0 (0)	0 (0)
	granulopoiesis:increased		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (18)	0 (0)	0 (0)	0 (0)	
spleen			<10>				<6>				<9>				<11>			
	deposit of hemosiderin		1 (10)	3 (30)	2 (20)	0 (0)	1 (17)	2 (33)	0 (0)	0 (0)	0 (0)	5 (56)	0 (0)	0 (0)	2 (18)	3 (27)	0 (0)	1 (9)
	extramedullary hematopoiesis		0 (0)	0 (0)	0 (0)	1 (10)	1 (17)	0 (0)	1 (17)	0 (0)	1 (11)	0 (0)	1 (11)	0 (0)	0 (0)	0 (0)	1 (9)	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. : 0328
 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	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	10				6				9				11			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
heart			<10>				< 6>				< 9>				<11>			
	thrombus		0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	myocardial fibrosis		4	0	0	0	3	0	0	0	5	0	0	0	5	2	0	0
			(40)	(0)	(0)	(0)	(50)	(0)	(0)	(0)	(56)	(0)	(0)	(0)	(45)	(18)	(0)	(0)
{Digestive system}																		
stomach			<10>				< 6>				< 9>				<11>			
	ulcer:forestomach		1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia:forestomach		2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
			(20)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	erosion:glandular stomach		0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	
	ulcer:glandular stomach		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)	(0)	(0)	(0)
	fibrosis glandular stomach		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(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. : 0328
 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 No. of Animals on Study Grade				Control 10				320 ppm 6				800 ppm 9				2000 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	herniation	<10>				<6>				<9>				<11>							
		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:central	0	1	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0
		(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(27)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:focal	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)
	fatty change:central	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)	(0)	(0)	(0)	(0)
	granulation	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(10)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	clear cell focus	1	0	0	0	0	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)	(0)	(0)	(0)	(0)
	acidophilic cell focus	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)	(0)	(0)	(0)	(0)
	basophilic cell focus	2	0	0	0	0	0	0	0	3	0	0	0	7	1	0	0 *				
		(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(64)	(9)	(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. : 0328
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 10				320 ppm 6				800 ppm 9				2000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<10>				<6>				<9>				<11>			
	spongiosis hepatitis		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)
	bile duct hyperplasia		9	0	0	0	4	0	0	0	6	3	0	0	9	0	0	0
			(90)	(0)	(0)	(0)	(67)	(0)	(0)	(0)	(67)	(33)	(0)	(0)	(82)	(0)	(0)	(0)
	cholangiofibrosis		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)	(0)	(0)	(0)	(0)
pancreas			<10>				<6>				<9>				<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)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	arteritis		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)	(0)	(0)	(0)
	islet cell 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>				<6>				<9>				<11>			
	chronic nephropathy		5	0	1	0	0	3	1	1 *	1	3	4	1 *	1	4	5	1 **
			(50)	(0)	(10)	(0)	(0)	(50)	(17)	(17)	(11)	(33)	(44)	(11)	(9)	(36)	(45)	(9)

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. : 0328
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	Control 10				320 ppm 6				800 ppm 9				2000 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																	
kidney		<10>				<6>				<9>				<11>			
	hydronephrosis	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)
	papillary necrosis	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	mineralization:cortico-medullary junction	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)
	mineralization:papilla	0	0	0	0	0	0	0	0	9	0	0	0 **	6	4	0	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)	(55)	(36)	(0)	(0)
	urothelial hyperplasia:pelvis	0	0	0	0	1	0	0	0	5	0	0	0 *	4	0	0	0
		(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(56)	(0)	(0)	(0)	(36)	(0)	(0)	(0)
{Endocrine system}																	
pituitary		<10>				<6>				<9>				<11>			
	hyperplasia	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	Rathke pouch	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
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

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study Grade	Control 10				320 ppm 6				800 ppm 9				2000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
thyroid	C-cell hyperplasia		<10>				< 6>				< 9>				<11>			
			2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
adrenal	hyperplasia:medulla		< 9>				< 6>				< 9>				<11>			
			0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	focal fatty change:cortex		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Reproductive system}																		
testis	atrophy		<10>				< 6>				< 9>				<11>			
			5	1	0	0	3	0	0	0	4	2	0	0	5	3	0	0
			(50)	(10)	(0)	(0)	(50)	(0)	(0)	(0)	(44)	(22)	(0)	(0)	(45)	(27)	(0)	(0)
	interstitial cell hyperplasia		2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(20)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
epididymis	spermatogenic granuloma		<10>				< 6>				< 9>				<11>			
			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)	(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. : 0328
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	Control No. of Animals on Study Grade				320 ppm 6				800 ppm 9				2000 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																	
semin ves		<10>				< 6>				< 9>				<11>			
	inflammation	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)
prostate		<10>				< 6>				< 9>				<11>			
	inflammation	1	2	0	0	0	1	0	0	1	1	0	0	2	0	1	0
		(10)	(20)	(0)	(0)	(0)	(17)	(0)	(0)	(11)	(11)	(0)	(0)	(18)	(0)	(9)	(0)
	hyperplasia	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
mammary gl		<10>				< 6>				< 9>				<11>			
	galactoceles	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
		(10)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)
{Nervous system}																	
brain		<10>				< 6>				< 9>				<11>			
	hemorrhage	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)
spinal cord		<10>				< 6>				< 9>				<11>			
	hemorrhage	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
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. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 9

		Control				320 ppm				800 ppm				2000 ppm			
		10				6				9				11			
Group Name		No. of Animals on Study				Grade				Grade				Grade			
Organ_____ Findings_____		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																	
eye	cataract	<10>				<6>				<9>				<11>			
		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)	(9)	(0)	(0)	(0)
Harder gl	atrophy	<10>				<6>				<9>				<11>			
		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)	(0)	(0)	(0)	(0)
	lymphocytic infiltration	<10>				<6>				<9>				<11>			
		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)	(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															

(HPT150)

BAIS3

APPENDIX K 6

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : FEMALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 10

Organ_____	Findings_____	Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	12				15				11				16			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<12>				<15>				<11>				<16>			
	scab		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Respiratory system}																		
nasal cavit			<12>				<15>				<11>				<16>			
	thrombus		1	0	0	0	4	0	0	0	3	0	0	0	2	0	0	0
		(8)	(0)	(0)	(0)	(27)	(0)	(0)	(0)	(27)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	
	cartilaginous metaplasia		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)	
	eosinophilic change:olfactory epithelium		6	0	1	0	6	1	0	0	3	1	0	0	4	1	0	0
		(50)	(0)	(8)	(0)	(40)	(7)	(0)	(0)	(27)	(9)	(0)	(0)	(25)	(6)	(0)	(0)	
	eosinophilic change:respiratory epithelium		4	0	0	0	5	0	0	0	2	0	0	0	1	0	0	0
		(33)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	
lung			<12>				<15>				<11>				<16>			
	congestion		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)	(6)	(0)	(0)	(0)	

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

STUDY NO. : 0328
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	Group Name No. of Animals on Study Grade	Control 12				320 ppm 15				800 ppm 11				2000 ppm 16			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung	necrosis:zonal		<12>				<15>				<11>				<16>			
			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)	(0)	(0)	(0)
{Hematopoietic system}																		
bone marrow	granulation		<12>				<15>				<11>				<16>			
			0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	increased hematopoiesis		4	0	0	0	5	0	0	0	5	0	0	0	11	0	0	0
			(33)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(45)	(0)	(0)	(0)	(69)	(0)	(0)	(0)
	granulopoiesis:increased		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)
spleen	deposit of hemosiderin		<12>				<15>				<11>				<16>			
			1	5	0	0	2	1	0	0	1	1	1	0	3	3	0	0
			(8)	(42)	(0)	(0)	(13)	(7)	(0)	(0)	(9)	(9)	(9)	(0)	(19)	(19)	(0)	(0)
	fibrosis		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)	(6)	(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. : 0328
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	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	12				15				11				16			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen			<12>				<15>				<11>				<16>			
	extramedullary hematopoiesis		0	0	2	0	0	0	4	0	0	4	2	0	0	3	4	0
			(0)	(0)	(17)	(0)	(0)	(0)	(27)	(0)	(0)	(36)	(18)	(0)	(0)	(19)	(25)	(0)
{Circulatory system}																		
heart			<12>				<15>				<11>				<16>			
	thrombus		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	mineralization		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)
	myocardial fibrosis		1	0	0	0	2	0	0	0	1	0	0	0	3	0	0	0
			(8)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(19)	(0)	(0)	(0)
{Digestive system}																		
tongue			<12>				<15>				<11>				<16>			
	fibrosis		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)	(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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 13

Organ	Findings	Group Name No. of Animals on Study Grade				Control 12				320 ppm 15				800 ppm 11				2000 ppm 16			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																					
stomach		<12>				<15>				<11>				<16>							
	mineralization	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	ulcer:forestomach	1	1	0	0	1	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0
		(8)	(8)	(0)	(0)	(7)	(7)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(0)
	hyperplasia:forestomach	1	0	0	0	3	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0
		(8)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(13)	(0)	(0)	(0)
	erosion:glandular stomach	0	1	0	0	2	0	0	0	1	0	0	0	1	1	0	0	1	1	0	0
		(0)	(8)	(0)	(0)	(13)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(6)	(6)	(0)	(0)	(6)	(6)	(0)	(0)
	ulcer:glandular stomach	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
liver		<12>				<15>				<11>				<16>							
	herniation	2	0	0	0	3	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0
		(17)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(13)	(0)	(0)	(0)
	necrosis:zonal	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)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:central	0	2	0	0	1	1	0	0	2	1	0	0	4	0	0	0	4	0	0	0
		(0)	(17)	(0)	(0)	(7)	(7)	(0)	(0)	(18)	(9)	(0)	(0)	(25)	(0)	(0)	(0)	(25)	(0)	(0)	(0)

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

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 14

		Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	12				15				11				16			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Digestive system}																		
liver			<12>				<15>				<11>				<16>			
	basophilic cell focus		1 (8)	0 (0)	0 (0)	0 (0)	2 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (6)	0 (0)	1 (6)	0 (0)
	bile duct hyperplasia		3 (25)	0 (0)	0 (0)	0 (0)	4 (27)	0 (0)	0 (0)	0 (0)	2 (18)	0 (0)	0 (0)	0 (0)	1 (6)	0 (0)	0 (0)	0 (0)
pancreas			<12>				<15>				<11>				<16>			
	atrophy		0 (0)	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)
{Urinary system}																		
kidney			<12>				<15>				<11>				<16>			
	infarct		0 (0)	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)
	inflammatory infiltration		0 (0)	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)
	chronic nephropathy		2 (17)	0 (0)	0 (0)	0 (0)	2 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	5 (31)	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. : 0328
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_____	Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	12				15				11				16			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<12>				<15>				<11>				<16>			
	hydronephrosis		0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	papillary necrosis		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	mineralization:cortico-medullary junction		2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(17)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
mineralization:papilla		3	0	0	0	2	0	0	0	3	0	0	0	5	0	0	0	
		(25)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(27)	(0)	(0)	(0)	(31)	(0)	(0)	(0)	
urothelial hyperplasia:pelvis		2	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	
		(17)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	
necrosis:cortex		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
		(0)	(0)	(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
{Endocrine system}																		
pituitary			<12>				<15>				<11>				<16>			
	cyst		1	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0
			(8)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(13)	(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. : 0328
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 No. of Animals on Study Grade	Control 12				320 ppm 15				800 ppm 11				2000 ppm 16			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Endocrine system}																		
pituitary			<12>				<15>				<11>				<16>			
	hyperplasia		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	1 (6)	0 (0)	0 (0)	0 (0)
	Rathke pouch		0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (6)	0 (0)	0 (0)	0 (0)	
thyroid			<12>				<15>				<11>				<15>			
	C-cell hyperplasia		0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)
adrenal			<12>				<15>				<11>				<16>			
	focal fatty change:cortex		0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	1 (6)	0 (0)	0 (0)	0 (0)
	necrosis:cortex		0 (0)	1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
{Reproductive system}																		
ovary			<12>				<15>				<11>				<18>			
	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 (6)	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. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 17

		Group Name No. of Animals on Study Grade	Control 12				320 ppm 15				800 ppm 11				2000 ppm 16				
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	
{Reproductive system}																			
uterus			<12>				<15>				<11>				<16>				
	cystic endometrial hyperplasia		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)	0 (0)
mammary gl			<12>				<15>				<11>				<16>				
	galactoceles		1 (8)	0 (0)	0 (0)	0 (0)	4 (27)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	3 (19)	0 (0)	0 (0)	0 (0)	0 (0)
{Special sense organs/appendage}																			
eye			<12>				<15>				<11>				<16>				
	cataract		0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	retinal atrophy		0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	keratitis		0 (0)	1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Harder gl		<12>				<15>				<11>				<16>				
	atrophy		1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (6)	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. : 0328
 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_____	Group Name	Control				320 ppm				800 ppm				2000 ppm			
		No. of Animals on Study	12				15				11				16			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
(Special sense organs/appendage)																		
Harder gl	lymphocytic infiltration		<12>				<15>				<11>				<16>			
		4	0	0	0	5	0	0	0	1	0	0	0	1	0	0	0	
	(33)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(6)	(0)	(0)	(0)		
 (Musculoskeletal system)																		
muscle	mineralization		<12>				<15>				<11>				<16>			
		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
	(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)		

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 1

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

STUDY NO. : 0328
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	320 ppm	800 ppm	2000 ppm
0 - 52	NO. OF EXAMINED ANIMALS		0	1	0	0
	NO. OF ANIMALS WITH TUMORS		0	1	0	0
	NO. OF ANIMALS WITH SINGLE TUMORS		0	1	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	1	0	0
	NO. OF TOTAL TUMORS		0	1	0	0
53 - 78	NO. OF EXAMINED ANIMALS		2	1	2	1
	NO. OF ANIMALS WITH TUMORS		1	1	2	1
	NO. OF ANIMALS WITH SINGLE TUMORS		0	1	2	1
	NO. OF ANIMALS WITH MULTIPLE TUMORS		1	0	0	0
	NO. OF BENIGN TUMORS		1	1	0	0
	NO. OF MALIGNANT TUMORS		1	0	2	1
	NO. OF TOTAL TUMORS		2	1	2	1
79 - 104	NO. OF EXAMINED ANIMALS		8	4	7	10
	NO. OF ANIMALS WITH TUMORS		8	4	7	9
	NO. OF ANIMALS WITH SINGLE TUMORS		5	0	1	1
	NO. OF ANIMALS WITH MULTIPLE TUMORS		3	4	6	8
	NO. OF BENIGN TUMORS		8	6	14	15
	NO. OF MALIGNANT TUMORS		4	3	3	6
	NO. OF TOTAL TUMORS		12	9	17	21
105 - 105	NO. OF EXAMINED ANIMALS		33	37	33	29
	NO. OF ANIMALS WITH TUMORS		32	37	33	29
	NO. OF ANIMALS WITH SINGLE TUMORS		8	9	15	7
	NO. OF ANIMALS WITH MULTIPLE TUMORS		24	28	18	22
	NO. OF BENIGN TUMORS		62	80	57	57
	NO. OF MALIGNANT TUMORS		6	6	7	5
	NO. OF TOTAL TUMORS		68	86	64	62

STUDY NO. : 0328
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	320 ppm	800 ppm	2000 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		41	43	42	39
	NO. OF ANIMALS WITH SINGLE TUMORS		13	11	18	9
	NO. OF ANIMALS WITH MULTIPLE TUMORS		28	32	24	30
	NO. OF BENIGN TUMORS		71	87	71	72
	NO. OF MALIGNANT TUMORS		11	10	12	12
	NO. OF TOTAL TUMORS		82	97	83	84

(HPT070)

BAIS3

APPENDIX L 2

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

STUDY NO. : 0328
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	320 ppm	800 ppm	2000 ppm
0 - 52	NO. OF EXAMINED ANIMALS		0	0	0	0
	NO. OF ANIMALS WITH TUMORS		0	0	0	0
	NO. OF ANIMALS WITH SINGLE TUMORS		0	0	0	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	0	0	0
	NO. OF MALIGNANT TUMORS		0	0	0	0
	NO. OF TOTAL TUMORS		0	0	0	0
53 - 78	NO. OF EXAMINED ANIMALS		3	3	4	1
	NO. OF ANIMALS WITH TUMORS		3	3	3	1
	NO. OF ANIMALS WITH SINGLE TUMORS		1	3	3	1
	NO. OF ANIMALS WITH MULTIPLE TUMORS		2	0	0	0
	NO. OF BENIGN TUMORS		3	0	1	0
	NO. OF MALIGNANT TUMORS		2	3	2	1
	NO. OF TOTAL TUMORS		5	3	3	1
79 - 104	NO. OF EXAMINED ANIMALS		9	12	7	15
	NO. OF ANIMALS WITH TUMORS		9	12	7	15
	NO. OF ANIMALS WITH SINGLE TUMORS		5	8	5	11
	NO. OF ANIMALS WITH MULTIPLE TUMORS		4	4	2	4
	NO. OF BENIGN TUMORS		8	9	4	9
	NO. OF MALIGNANT TUMORS		5	9	5	11
	NO. OF TOTAL TUMORS		13	18	9	20
105 - 105	NO. OF EXAMINED ANIMALS		29	28	32	29
	NO. OF ANIMALS WITH TUMORS		19	19	16	20
	NO. OF ANIMALS WITH SINGLE TUMORS		13	16	10	11
	NO. OF ANIMALS WITH MULTIPLE TUMORS		6	3	6	9
	NO. OF BENIGN TUMORS		22	20	21	27
	NO. OF MALIGNANT TUMORS		5	2	3	3
	NO. OF TOTAL TUMORS		27	22	24	30

STUDY NO. : 0328
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	320 ppm	800 ppm	2000 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		31	34	26	36
	NO. OF ANIMALS WITH SINGLE TUMORS		19	27	18	23
	NO. OF ANIMALS WITH MULTIPLE TUMORS		12	7	8	13
	NO. OF BENIGN TUMORS		33	29	26	36
	NO. OF MALIGNANT TUMORS		12	14	10	15
	NO. OF TOTAL TUMORS		45	43	36	51

(HPT070)

BAIS3

APPENDIX M 1

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS : SUMMARY

RAT : MALE : (2-YEAR STUDY)

STUDY NO. : 0328
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	320 ppm 50	800 ppm 50	2000 ppm 50
{Integumentary system/appandage}						
skin/app			<49>	<50>	<50>	<50>
	squamous cell papilloma		1 (2%)	2 (4%)	3 (6%)	4 (8%)
	basal cell epithelioma		0 (0%)	1 (2%)	1 (2%)	0 (0%)
	keratoacanthoma		0 (0%)	3 (6%)	3 (6%)	2 (4%)
	sebaceous adenoma		0 (0%)	0 (0%)	2 (4%)	0 (0%)
	squamous cell carcinoma		0 (0%)	0 (0%)	1 (2%)	1 (2%)
	trichoepithelioma:malignant		0 (0%)	0 (0%)	1 (2%)	0 (0%)
subcutis			<50>	<50>	<50>	<50>
	fibroma		2 (4%)	6 (12%)	2 (4%)	4 (8%)
	lipoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	osteosarcoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	schwannoma:malignant		0 (0%)	0 (0%)	0 (0%)	1 (2%)
{Respiratory system}						
lung			<50>	<50>	<50>	<50>
	bronchiolar-alveolar adenoma		4 (8%)	1 (2%)	1 (2%)	1 (2%)
	bronchiolar-alveolar carcinoma		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

(HPT085)

BAIS3

STUDY NO. : 0328
 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	320 ppm 50	800 ppm 50	2000 ppm 50
{Hematopoietic system}						
spleen	hemangioma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
	mononuclear cell leukemia		5 (10%)	8 (16%)	5 (10%)	1 (2%)
{Digestive system}						
oral cavity	squamous cell papilloma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
	tongue		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
stomach	squamous cell carcinoma		<50> 1 (2%)	<50> 0 (0%)	<49> 0 (0%)	<50> 0 (0%)
	schwannoma:malignant		0 (0%)	0 (0%)	0 (0%)	1 (2%)
liver	hepatocellular adenoma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 6 (12%)
	cholangiocellular adenoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	hepatocellular carcinoma		0 (0%)	0 (0%)	1 (2%)	2 (4%)
pancreas	islet cell adenoma		<50> 2 (4%)	<50> 7 (14%)	<50> 0 (0%)	<50> 2 (4%)
{Urinary system}						
kidney	renal cell adenoma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 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. : 0328
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	320 ppm 50	800 ppm 50	2000 ppm 50
{Urinary system}						
kidney	renal cell carcinoma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 1 (2%)
	nephroblastoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
urin bladd	transitional cell papilloma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
{Endocrine system}						
pituitary	adenoma		<50> 19 (38%)	<50> 16 (32%)	<50> 12 (24%)	<50> 9 (18%)
thyroid	C-cell adenoma		<50> 6 (12%)	<50> 10 (20%)	<50> 6 (12%)	<50> 6 (12%)
	follicular adenoma		0 (0%)	1 (2%)	3 (6%)	1 (2%)
	C-cell carcinoma		1 (2%)	0 (0%)	1 (2%)	0 (0%)
	follicular adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
adrenal	pheochromocytoma		<49> 4 (8%)	<50> 6 (12%)	<50> 6 (12%)	<50> 3 (6%)
	cortical adenoma		0 (0%)	1 (2%)	1 (2%)	0 (0%)
	pheochromocytoma:malignant		1 (2%)	0 (0%)	0 (0%)	0 (0%)
{Reproductive system}						
testis	interstitial cell tumor		<50> 34 (68%)	<50> 41 (82%)	<50> 41 (82%)	<50> 40 (80%)
< a > a : Number of animals examined at the site b (c) b : Number of animals with neoplasm c : b / a * 100						
(HPT085)						BAIS3

STUDY NO. : 0328
 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	320 ppm 50	800 ppm 50	2000 ppm 50
{Reproductive system}						
testis			<50>	<50>	<50>	<50>
	rete testis adenoma		4 (8%)	1 (2%)	5 (10%)	1 (2%)
mammary gl			<50>	<50>	<50>	<50>
	fibroadenoma		2 (4%)	0 (0%)	1 (2%)	0 (0%)
prep/cli gl			<50>	<50>	<50>	<50>
	adenoma		3 (6%)	1 (2%)	2 (4%)	5 (10%)
{Nervous system}						
brain			<50>	<50>	<50>	<50>
	glioma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
{Special sense organs/appendage}						
Zymbal gl			<50>	<50>	<50>	<50>
	adenoma		0 (0%)	0 (0%)	0 (0%)	4 (8%)
{Musculoskeletal system}						
bone			<50>	<50>	<50>	<50>
	osteoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	osteosarcoma		1 (2%)	1 (2%)	1 (2%)	0 (0%)
cartilage			<50>	<50>	<50>	<50>
	chondrosarcoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
vertebra			<50>	<50>	<50>	<50>
	chordoma:malignant		1 (2%)	0 (0%)	0 (0%)	0 (0%)
{Body cavities}						
peritoneum			<50>	<50>	<50>	<50>
	mesothelioma		2 (4%)	0 (0%)	2 (4%)	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. : 0328
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	320 ppm 50	800 ppm 50	2000 ppm 50
{Body cavities}						
retroperit	paraganglioma:benign		<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

(HPT085)

BAIS3

APPENDIX M 2

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS : SUMMARY

RAT : FEMALE : (2-YEAR STUDY)

STUDY NO. : 0328
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	320 ppm 50	800 ppm 50	2000 ppm 50
{Integumentary system/appandage}						
skin/app	squamous cell papilloma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 2 (4%)
subcutis	lipoma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
	xanthoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	malignant fibrous histiocyoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
{Respiratory system}						
lung	bronchiolar-alveolar adenoma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
{Hematopoietic system}						
spleen	mononuclear cell leukemia		<50> 5 (10%)	<50> 9 (18%)	<50> 3 (6%)	<50> 4 (8%)
{Digestive system}						
tongue	squamous cell papilloma		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
stomach	squamous cell papilloma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
pancreas	islet cell adenoma		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
{Urinary system}						
urin bladd	transitional cell papilloma		<49> 1 (2%)	<49> 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. : 0328
 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	320 ppm 50	800 ppm 50	2000 ppm 50
{Urinary system}						
urin bladd	transitional cell carcinoma		<49> 0 (0%)	<49> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
{Endocrine system}						
pituitary	adenoma		<50> 16 (32%)	<50> 11 (22%)	<50> 12 (24%)	<50> 12 (24%)
	adenocarcinoma		1 (2%)	1 (2%)	0 (0%)	0 (0%)
thyroid	C-cell adenoma		<49> 0 (0%)	<50> 5 (10%)	<50> 2 (4%)	<49> 3 (6%)
	follicular adenoma		2 (4%)	0 (0%)	0 (0%)	0 (0%)
	follicular adenocarcinoma		1 (2%)	1 (2%)	0 (0%)	0 (0%)
adrenal	pheochromocytoma		<50> 3 (6%)	<50> 2 (4%)	<50> 0 (0%)	<50> 0 (0%)
	cortical adenoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	pheochromocytoma:malignant		1 (2%)	1 (2%)	1 (2%)	0 (0%)
{Reproductive system}						
ovary	granular cell tumor		<50> 0 (0%)	<49> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
	adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)

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

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 8

Organ	Findings	Group Name No. of animals on Study	Control 50	320 ppm 50	800 ppm 50	2000 ppm 50
{Reproductive system}						
ovary			<50>	<49>	<50>	<50>
	sarcoma:NOS		1 (2%)	0 (0%)	0 (0%)	0 (0%)
uterus			<49>	<50>	<50>	<50>
	leiomyoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	papillary adenoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	endometrial stromal polyp		6 (12%)	7 (14%)	9 (18%)	11 (22%)
	adenocarcinoma		1 (2%)	2 (4%)	2 (4%)	3 (6%)
	schwannoma:malignant		0 (0%)	0 (0%)	1 (2%)	1 (2%)
	histiocytic sarcoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
vagina			<49>	<50>	<50>	<50>
	squamous cell papilloma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
mammary gl			<50>	<50>	<50>	<50>
	fibroadenoma		10 (20%)	5 (10%)	2 (4%)	5 (10%)
prep/cli gl			<50>	<50>	<50>	<50>
	adenoma		2 (4%)	2 (4%)	3 (6%)	4 (8%)
{Nervous system}						
brain			<50>	<50>	<50>	<50>
	glioma		2 (4%)	0 (0%)	0 (0%)	0 (0%)

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

(HPT085)

BAIS3

STUDY NO. : 0328
 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	320 ppm 50	800 ppm 50	2000 ppm 50
{Special sense organs/appendage}						
Zymbal gl			<50>	<50>	<50>	<50>
	squamous cell carcinoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	adenocarcinoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
{Musculoskeletal system}						
muscle			<50>	<50>	<50>	<50>
	hemangioma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
bone			<50>	<50>	<50>	<50>
	osteosarcoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
{Body cavities}						
retroperit			<50>	<50>	<50>	<50>
	paraganglioma: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 1

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

RAT : MALE

(2-YEAR STUDY)

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 1

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : skin/appendage TUMOR : squamous cell papilloma				
Tumor rate				
Overall rates(a)	1/49(2.0)	2/50(4.0)	3/50(6.0)	4/50(8.0)
Adjusted rates(b)	2.50	4.55	7.32	10.26
Terminal rates(c)	1/40(2.5)	2/44(4.5)	3/41(7.3)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0751			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1715			
Fisher Exact test(e)		P = 0.5077	P = 0.3163	P = 0.1874
SITE : skin/appendage TUMOR : keratoacanthoma				
Tumor rate				
Overall rates(a)	0/49(0.0)	3/50(6.0)	3/50(6.0)	2/50(4.0)
Adjusted rates(b)	0.0	6.82	6.98	5.13
Terminal rates(c)	0/40(0.0)	3/44(6.8)	2/41(4.9)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.2949			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.6050			
Fisher Exact test(e)		P = 0.1250	P = 0.1250	P = 0.2525
SITE : skin/appendage TUMOR : squamous cell papilloma, keratoacanthoma, squamous cell carcinoma				
Tumor rate				
Overall rates(a)	1/49(2.0)	5/50(10.0)	6/50(12.0)	7/50(14.0)
Adjusted rates(b)	2.50	11.36	13.95	17.95
Terminal rates(c)	1/40(2.5)	5/44(11.4)	5/41(12.2)	7/39(17.9)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0422*			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0804			
Fisher Exact test(e)		P = 0.1068	P = 0.0590	P = 0.0317*

STUDY No. : 0328
 ANIMAL : RAT F344/DuCrj
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 2

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : subcutis TUMOR : fibroma				
Tumor rate				
Overall rates(a)	2/50(4.0)	6/50(12.0)	2/50(4.0)	4/50(8.0)
Adjusted rates(b)	5.00	13.33	4.65	8.51
Terminal rates(c)	2/40(5.0)	5/44(11.4)	1/41(2.4)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.4339			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.8268			
Fisher Exact test(e)		P = 0.1343	P = 0.6913	P = 0.3389
SITE : lung TUMOR : bronchiolar-alveolar adenoma				
Tumor rate				
Overall rates(a)	4/50(8.0)	1/50(2.0)	1/50(2.0)	1/50(2.0)
Adjusted rates(b)	10.00	2.27	2.44	2.56
Terminal rates(c)	4/40(10.0)	1/44(2.3)	1/41(2.4)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.8727			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.2360			
Fisher Exact test(e)		P = 0.1811	P = 0.1811	P = 0.1811
SITE : lung TUMOR : bronchiolar-alveolar adenoma, bronchiolar-alveolar carcinoma				
Tumor rate				
Overall rates(a)	4/50(8.0)	1/50(2.0)	1/50(2.0)	2/50(4.0)
Adjusted rates(b)	10.00	2.27	2.44	2.56
Terminal rates(c)	4/40(10.0)	1/44(2.3)	1/41(2.4)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.1237			
Prevalence method(d)	P = 0.8727			
Combined analysis(d)	P = 0.6673			
Cochran-Armitage test(e)	P = 0.5948			
Fisher Exact test(e)		P = 0.1811	P = 0.1811	P = 0.3389

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 3

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	5/50(10.0)	8/50(16.0)	5/50(10.0)	1/50(2.0)
Adjusted rates(b)	7.50	13.64	4.88	0.0
Terminal rates(c)	3/40(7.5)	6/44(13.6)	2/41(4.9)	0/39(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.7062			
Prevalence method(d)	P = 0.9857			
Combined analysis(d)	P = 0.9767			
Cochran-Armitage test(e)	P = 0.0469*			
Fisher Exact test(e)		P = 0.2768	P = 0.6297	P = 0.1022
SITE : liver TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	1/50(2.0)	0/50(0.0)	6/50(12.0)
Adjusted rates(b)	0.0	2.27	0.0	13.33
Terminal rates(c)	0/40(0.0)	1/44(2.3)	0/41(0.0)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0004**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0005**			
Fisher Exact test(e)		P = 0.5000	P = N.C.	P = 0.0133*
SITE : liver TUMOR : hepatocellular adenoma, hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	1/50(2.0)	1/50(2.0)	8/50(16.0)
Adjusted rates(b)	0.0	2.27	2.44	17.78
Terminal rates(c)	0/40(0.0)	1/44(2.3)	1/41(2.4)	6/39(15.4)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0001**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0001**			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.0029**

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 4

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : pancreas TUMOR : islet cell adenoma				
Tumor rate				
Overall rates(a)	2/50(4.0)	7/50(14.0)	0/50(0.0)	2/50(4.0)
Adjusted rates(b)	5.00	13.64	0.0	5.13
Terminal rates(c)	2/40(5.0)	6/44(13.6)	0/41(0.0)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.5630			
Prevalence method(d)	P = 0.7600			
Combined analysis(d)	P = 0.8082			
Cochran-Armitage test(e)	P = 0.3394			
Fisher Exact test(e)		P = 0.0798	P = 0.2475	P = 0.6913
SITE : kidney TUMOR : renal cell adenoma,renal cell carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	1/50(2.0)	0/50(0.0)	3/50(6.0)
Adjusted rates(b)	0.0	2.27	0.0	5.13
Terminal rates(c)	0/40(0.0)	1/44(2.3)	0/41(0.0)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.1225			
Prevalence method(d)	P = 0.0742			
Combined analysis(d)	P = 0.0220*			
Cochran-Armitage test(e)	P = 0.0334*			
Fisher Exact test(e)		P = 0.5000	P = N.C.	P = 0.1212
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	19/50(38.0)	16/50(32.0)	12/50(24.0)	9/50(18.0)
Adjusted rates(b)	40.00	34.09	19.51	19.05
Terminal rates(c)	16/40(40.0)	15/44(34.1)	8/41(19.5)	7/39(17.9)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9067			
Prevalence method(d)	P = 0.9740			
Combined analysis(d)	P = 0.9903			
Cochran-Armitage test(e)	P = 0.0231*			
Fisher Exact test(e)		P = 0.3377	P = 0.0971	P = 0.0220*

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 5

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : pituitary gland TUMOR : adenoma, adenocarcinoma				
Tumor rate				
Overall rates(a)	19/50(38.0)	16/50(32.0)	12/50(24.0)	9/50(18.0)
Adjusted rates(b)	40.00	34.09	19.51	19.05
Terminal rates(c)	16/40(40.0)	15/44(34.1)	8/41(19.5)	7/39(17.9)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9067			
Prevalence method(d)	P = 0.9740			
Combined analysis(d)	P = 0.9903			
Cochran-Armitage test(e)	P = 0.0231*			
Fisher Exact test(e)		P = 0.3377	P = 0.0971	P = 0.0220*
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	6/50(12.0)	10/50(20.0)	6/50(12.0)	6/50(12.0)
Adjusted rates(b)	14.63	22.73	14.63	12.24
Terminal rates(c)	5/40(12.5)	10/44(22.7)	6/41(14.6)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7188			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.6216			
Fisher Exact test(e)		P = 0.2070	P = 0.6202	P = 0.6202
SITE : thyroid TUMOR : follicular adenoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	1/50(2.0)	3/50(6.0)	1/50(2.0)
Adjusted rates(b)	0.0	2.13	6.25	2.27
Terminal rates(c)	0/40(0.0)	0/44(0.0)	2/41(4.9)	0/39(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.3114			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.6250			
Fisher Exact test(e)		P = 0.5000	P = 0.1212	P = 0.5000

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 6

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : thyroid TUMOR : C-cell adenoma, C-cell carcinoma				
Tumor rate				
Overall rates(a)	7/50(14.0)	10/50(20.0)	7/50(14.0)	6/50(12.0)
Adjusted rates(b)	17.07	22.73	17.07	12.24
Terminal rates(c)	6/40(15.0)	10/44(22.7)	7/41(17.1)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7800			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.4980			
Fisher Exact test(e)		P = 0.2977	P = 0.8129	P = 0.5000
SITE : thyroid TUMOR : follicular adenoma, follicular adenocarcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	2/50(4.0)	3/50(6.0)	1/50(2.0)
Adjusted rates(b)	0.0	4.26	6.25	2.27
Terminal rates(c)	0/40(0.0)	1/44(2.3)	2/41(4.9)	0/39(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.4142			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.8443			
Fisher Exact test(e)		P = 0.2475	P = 0.1212	P = 0.5000
SITE : adrenal gland TUMOR : pheochromocytoma				
Tumor rate				
Overall rates(a)	4/49(8.2)	6/50(12.0)	6/50(12.0)	3/50(6.0)
Adjusted rates(b)	10.00	13.64	13.04	7.69
Terminal rates(c)	4/40(10.0)	6/44(13.6)	5/41(12.2)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7437			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.4899			
Fisher Exact test(e)		P = 0.3833	P = 0.3833	P = 0.4886

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 7

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : adrenal gland TUMOR : pheochromocytoma, pheochromocytoma:malignant				
Tumor rate				
Overall rates(a)	5/49(10.2)	6/50(12.0)	6/50(12.0)	3/50(6.0)
Adjusted rates(b)	10.00	13.64	13.04	7.89
Terminal rates(c)	4/40(10.0)	6/44(13.6)	5/41(12.2)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = 1.0000 ?			
Prevalence method(d)	P = 0.7542			
Combined analysis(d)	P = 0.8224			
Cochran-Armitage test(e)	P = 0.3585			
Fisher Exact test(e)		P = 0.5144	P = 0.5144	P = 0.3461
SITE : testis TUMOR : interstitial cell tumor				
Tumor rate				
Overall rates(a)	34/50(68.0)	41/50(82.0)	41/50(82.0)	40/50(80.0)
Adjusted rates(b)	77.50	86.96	89.13	89.74
Terminal rates(c)	31/40(77.5)	38/44(86.4)	36/41(87.8)	35/39(89.7)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.1875			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.3408			
Fisher Exact test(e)		P = 0.0826	P = 0.0826	P = 0.1271
SITE : testis TUMOR : rete testis adenoma				
Tumor rate				
Overall rates(a)	4/50(8.0)	1/50(2.0)	5/50(10.0)	1/50(2.0)
Adjusted rates(b)	10.00	2.27	12.20	2.56
Terminal rates(c)	4/40(10.0)	1/44(2.3)	5/41(12.2)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7978			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.3562			
Fisher Exact test(e)		P = 0.1811	P = 0.5000	P = 0.1811

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 8

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : preputial/clitoral gland				
TUMOR : adenoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	1/50(2.0)	2/50(4.0)	5/50(10.0)
Adjusted rates(b)	7.32	2.27	4.88	10.87
Terminal rates(c)	2/40(5.0)	1/44(2.3)	2/41(4.9)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0977			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1727			
Fisher Exact test(e)		P = 0.3087	P = 0.5000	P = 0.3575
SITE : Zymbal gland				
TUMOR : adenoma				
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	7.69
Terminal rates(c)	0/40(0.0)	0/44(0.0)	0/41(0.0)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.1225			
Prevalence method(d)	P = 0.0027**?			
Combined analysis(d)	P = 0.0006**?			
Cochran-Armitage test(e)	P = 0.0012**			
Fisher Exact test(e)		P = N. C.	P = N. C.	P = 0.0587

(HPT360A)

BAIS3

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 9

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : peritoneum TUMOR : mesothelioma				
Tumor rate				
Overall rates(a)	2/50(4.0)	0/50(0.0)	2/50(4.0)	3/50(6.0)
Adjusted rates(b)	2.50	0.0	2.44	5.13
Terminal rates(c)	1/40(2.5)	0/44(0.0)	1/41(2.4)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3476			
Prevalence method(d)	P = 0.1305			
Combined analysis(d)	P = 0.1389			
Cochran-Armitage test(e)	P = 0.2785			
Fisher Exact test(e)		P = 0.2475	P = 0.6913	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 : * : $P \leq 0.05$ ** : $P \leq 0.01$
N.C.:Statistical value cannot be calculated and was not significant.

APPENDIX N 2

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

RAT : FEMALE

(2-YEAR STUDY)

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 10

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	5/50(10.0)	9/50(18.0)	3/50(6.0)	4/50(8.0)
Adjusted rates(b)	5.26	5.71	2.56	0.0
Terminal rates(c)	2/38(5.3)	2/35(5.7)	1/39(2.6)	0/34(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.5463			
Prevalence method(d)	P = 0.9332			
Combined analysis(d)	P = 0.7868			
Cochran-Armitage test(e)	P = 0.3466			
Fisher Exact test(e)		P = 0.1940	P = 0.3575	P = 0.5000
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	16/50(32.0)	11/50(22.0)	12/50(24.0)	12/50(24.0)
Adjusted rates(b)	31.58	23.68	25.64	26.47
Terminal rates(c)	12/38(31.6)	7/35(20.0)	10/39(25.6)	9/34(26.5)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.7183			
Prevalence method(d)	P = 0.5500			
Combined analysis(d)	P = 0.6551			
Cochran-Armitage test(e)	P = 0.5700			
Fisher Exact test(e)		P = 0.1839	P = 0.2522	P = 0.2522
SITE : pituitary gland TUMOR : adenoma, adenocarcinoma				
Tumor rate				
Overall rates(a)	17/50(34.0)	12/50(24.0)	12/50(24.0)	12/50(24.0)
Adjusted rates(b)	34.21	23.68	25.64	26.47
Terminal rates(c)	13/38(34.2)	7/35(20.0)	10/39(25.6)	9/34(26.5)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.7696			
Prevalence method(d)	P = 0.6247			
Combined analysis(d)	P = 0.7424			
Cochran-Armitage test(e)	P = 0.4108			
Fisher Exact test(e)		P = 0.1891	P = 0.1891	P = 0.1891

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : FEMALE

NEOPLASTIC LESIONS--INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 11

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	0/49(0.0)	5/50(10.0)	2/50(4.0)	3/49(6.1)
Adjusted rates(b)	0.0	14.29	5.13	8.82
Terminal rates(c)	0/37(0.0)	5/35(14.3)	2/39(5.1)	3/34(8.8)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.2411			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.5418			
Fisher Exact test(e)		P = 0.0296*	P = 0.2525	P = 0.1211
SITE : thyroid TUMOR : C-cell adenoma, C-cell carcinoma				
Tumor rate				
Overall rates(a)	0/49(0.0)	5/50(10.0)	2/50(4.0)	3/49(6.1)
Adjusted rates(b)	0.0	14.29	5.13	8.82
Terminal rates(c)	0/37(0.0)	5/35(14.3)	2/39(5.1)	3/34(8.8)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.2411			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.5418			
Fisher Exact test(e)		P = 0.0296*	P = 0.2525	P = 0.1211
SITE : thyroid TUMOR : follicular adenoma, follicular adenocarcinoma				
Tumor rate				
Overall rates(a)	3/49(6.1)	1/50(2.0)	0/50(0.0)	0/49(0.0)
Adjusted rates(b)	8.11	2.86	0.0	0.0
Terminal rates(c)	3/37(8.1)	1/35(2.9)	0/39(0.0)	0/34(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9865			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0624			
Fisher Exact test(e)		P = 0.3010	P = 0.1175	P = 0.1211

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 12

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : adrenal gland TUMOR : pheochromocytoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	2/50(4.0)	0/50(0.0)	0/50(0.0)
Adjusted rates(b)	6.12	4.44	0.0	0.0
Terminal rates(c)	2/38(5.3)	1/35(2.9)	0/39(0.0)	0/34(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9881			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0520			
Fisher Exact test(e)		P = 0.5000	P = 0.1212	P = 0.1212
SITE : adrenal gland TUMOR : pheochromocytoma, pheochromocytoma:malignant				
Tumor rate				
Overall rates(a)	4/50(8.0)	3/50(6.0)	1/50(2.0)	0/50(0.0)
Adjusted rates(b)	8.16	4.55	2.56	0.0
Terminal rates(c)	2/38(5.3)	1/35(2.9)	1/39(2.6)	0/34(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.5498			
Prevalence method(d)	P = 0.9894			
Combined analysis(d)	P = 0.9914			
Cochran-Armitage test(e)	P = 0.0334*			
Fisher Exact test(e)		P = 0.5000	P = 0.1811	P = 0.0587
SITE : uterus TUMOR : endometrial stromal polyp				
Tumor rate				
Overall rates(a)	6/49(12.2)	7/50(14.0)	9/50(18.0)	11/50(22.0)
Adjusted rates(b)	13.95	13.89	20.51	29.73
Terminal rates(c)	4/37(10.8)	4/35(11.4)	8/39(20.5)	9/34(26.5)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.5944			
Prevalence method(d)	P = 0.0446*			
Combined analysis(d)	P = 0.0626			
Cochran-Armitage test(e)	P = 0.1622			
Fisher Exact test(e)		P = 0.5158	P = 0.3030	P = 0.1539

STUDY No. : 0328
ANIMAL : RAT F344/DuCrj
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 13

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : uterus TUMOR : adenocarcinoma				
Tumor rate				
Overall rates(a)	1/49(2.0)	2/50(4.0)	2/50(4.0)	3/50(6.0)
Adjusted rates(b)	2.70	0.0	2.56	5.88
Terminal rates(c)	1/37(2.7)	0/35(0.0)	1/39(2.6)	2/34(5.9)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3753			
Prevalence method(d)	P = 0.1291			
Combined analysis(d)	P = 0.1576			
Cochran-Armitage test(e)	P = 0.3497			
Fisher Exact test(e)		P = 0.5077	P = 0.5077	P = 0.3163
SITE : uterus TUMOR : papillary adenoma, adenocarcinoma				
Tumor rate				
Overall rates(a)	1/49(2.0)	2/50(4.0)	2/50(4.0)	4/50(8.0)
Adjusted rates(b)	2.70	0.0	2.56	8.82
Terminal rates(c)	1/37(2.7)	0/35(0.0)	1/39(2.6)	3/34(8.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3753			
Prevalence method(d)	P = 0.0440*			
Combined analysis(d)	P = 0.0716			
Cochran-Armitage test(e)	P = 0.1527			
Fisher Exact test(e)		P = 0.5077	P = 0.5077	P = 0.1874
SITE : mammary gland TUMOR : fibroadenoma				
Tumor rate				
Overall rates(a)	10/50(20.0)	5/50(10.0)	2/50(4.0)	5/50(10.0)
Adjusted rates(b)	19.05	13.89	4.76	11.76
Terminal rates(c)	7/38(18.4)	4/35(11.4)	1/39(2.6)	4/34(11.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3133			
Prevalence method(d)	P = 0.8901			
Combined analysis(d)	P = 0.8433			
Cochran-Armitage test(e)	P = 0.2388			
Fisher Exact test(e)		P = 0.1312	P = 0.0139*	P = 0.1312

STUDY No. : 0328
 ANIMAL : RAT F344/DuCrj
 SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 14

Group Name	Control	320 ppm	800 ppm	2000 ppm
SITE : mammary gland TUMOR : adenocarcinoma				
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	2.94
Terminal rates(c)	0/38(0.0)	0/35(0.0)	0/39(0.0)	1/34(2.9)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0033**?			
Prevalence method(d)	P = 0.1079			
Combined analysis(d)	P = 0.0007**?			
Cochran-Armitage test(e)	P = 0.0012**			
Fisher Exact test(e)		P = N.C.	P = N.C.	P = 0.0587
SITE : preputial/clitoral gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	2/50(4.0)	2/50(4.0)	3/50(6.0)	4/50(8.0)
Adjusted rates(b)	2.63	5.71	5.13	6.67
Terminal rates(c)	1/38(2.6)	2/35(5.7)	2/39(5.1)	2/34(5.9)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3372			
Prevalence method(d)	P = 0.1660			
Combined analysis(d)	P = 0.1538			
Cochran-Armitage test(e)	P = 0.3152			
Fisher Exact test(e)		P = 0.6913	P = 0.5000	P = 0.3389

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

APPENDIX O 1

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

RAT : MALE : ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

		Group Name No. of Animals on Study	Control 50	320 ppm 50	800 ppm 50	2000 ppm 50
Organ	Findings					
{Respiratory system}						
nasal cavit			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	0	2	1
lung			<50>	<50>	<50>	<50>
	leukemic cell infiltration		5	7	5	0
	metastasis:bone tumor		0	1	1	0
	metastasis:kidney tumor		0	1	0	1
	metastasis:cartilage tumor		1	0	0	0
{Hematopoietic system}						
bone marrow			<50>	<50>	<50>	<50>
	leukemic cell infiltration		2	6	4	1
lymph node			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	2	1	0
	metastasis:kidney tumor		0	1	0	1
{Circulatory system}						
heart			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	1	1	0
{Digestive system}						
liver			<50>	<50>	<50>	<50>
	leukemic cell infiltration		5	6	5	1
{Urinary system}						
kidney			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	1	2	1

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

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 2

		Group Name	Control	320 ppm	800 ppm	2000 ppm
		No. of Animals on Study	50	50	50	50
Organ	Findings					
{Endocrine system}						
pituitary			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	0	2	1
adrenal			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	0	3	1
{Nervous system}						
brain			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	0	2	1
spinal cord			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	0	2	1
{Musculoskeletal system}						
muscle			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	1	0	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

(JPT150)

BAIS3

APPENDIX O 2

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

RAT : FEMALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 3

		Group Name No. of Animals on Study	Control 50	320 ppm 50	800 ppm 50	2000 ppm 50
Organ	Findings					
{Integumentary system/appandage}						
skin/app	leukemic cell infiltration		<50> 0	<50> 0	<50> 1	<50> 0
{Respiratory system}						
nasal cavit	leukemic cell infiltration		<50> 0	<50> 0	<50> 2	<50> 1
lung	leukemic cell infiltration		<50> 5	<50> 9	<50> 3	<50> 3
	metastasis:uterus tumor		1	1	2	1
	metastasis:adrenal tumor		1	0	1	0
	metastasis:thyroid tumor		1	0	0	0
	metastasis:bone tumor		0	0	0	1
	metastasis:ovary tumor		0	1	0	0
	metastasis:mammary gland tumor		0	0	0	1
	metastasis:retroperitoneum tumor		0	0	1	0
	metastasis:urinary bladder tumor		0	0	1	0
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		<50> 5	<50> 7	<50> 3	<50> 4
lymph node	leukemic cell infiltration		<50> 0	<50> 4	<50> 3	<50> 1

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

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 4

		Group Name No. of Animals on Study	Control 50	320 ppm 50	800 ppm 50	2000 ppm 50
Organ	Findings					
{Hematopoietic system}						
lymph node			<50>	<50>	<50>	<50>
	metastasis:uterus tumor		0	1	0	0
	metastasis:ovary tumor		0	1	0	0
{Circulatory system}						
heart			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	0	2	1
{Digestive system}						
liver			<50>	<50>	<50>	<50>
	leukemic cell infiltration		5	9	3	4
	metastasis:uterus tumor		0	1	1	1
	metastasis:adrenal tumor		0	0	1	0
pancreas			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	1	0	0
	metastasis:ovary tumor		0	1	0	0
	metastasis:urinary bladder tumor		0	0	1	0
{Urinary system}						
kidney			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	2	2	2
	metastasis:uterus tumor		0	1	1	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 5

Group Name No. of Animals on Study		Control 50	320 ppm 50	800 ppm 50	2000 ppm 50
Organ	Findings				
{Urinary system}					
kidney		<50>	<50>	<50>	<50>
	metastasis:urinary bladder tumor	0	0	1	0
urin bladd		<50>	<50>	<50>	<50>
	metastasis:uterus tumor	0	1	0	0
{Endocrine system}					
pituitary		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	1	0	1
adrenal		<50>	<50>	<50>	<50>
	leukemic cell infiltration	1	0	2	1
{Reproductive system}					
ovary		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	1	2	1
uterus		<50>	<50>	<50>	<50>
	leukemic cell infiltration	1	1	1	1
	metastasis:urinary bladder tumor	0	0	1	0
{Nervous system}					
brain		<50>	<50>	<50>	<50>
	leukemic cell infiltration	1	4	2	3
	metastasis:pituitary tumor	1	1	0	0
spinal cord		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	4	1	3

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

STUDY NO. : 0328
 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	320 ppm 50	800 ppm 50	2000 ppm 50
Organ	Findings				
{Special sense organs/appendage}					
Harder gl	leukemic cell infiltration	<50> 0	<50> 0	<50> 1	<50> 0
{Musculoskeletal system}					
muscle	leukemic cell infiltration	<50> 0	<50> 0	<50> 1	<50> 0
{Body cavities}					
mediastinum	metastasis:urinary bladder tumor	<50> 0	<50> 0	<50> 1	<50> 0
peritoneum	metastasis:uterus tumor	<50> 0	<50> 0	<50> 1	<50> 1
	metastasis:ovary tumor	1	0	0	0
	metastasis:urinary bladder tumor	0	0	1	0
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

(JPT150)

BAIS3

APPENDIX O 3

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

RAT : MALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
 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 40	320 ppm 44	800 ppm 41	2000 ppm 39
Organ	Findings					
{Respiratory system}						
lung			<40>	<44>	<41>	<39>
	leukemic cell infiltration		3	6	2	0
	metastasis: kidney tumor		0	1	0	0
	metastasis: cartilage tumor		1	0	0	0
{Hematopoietic system}						
bone marrow			<40>	<44>	<41>	<39>
	leukemic cell infiltration		0	4	1	0
lymph node			<40>	<44>	<41>	<39>
	metastasis: kidney tumor		0	1	0	0
{Digestive system}						
liver			<40>	<44>	<41>	<39>
	leukemic cell infiltration		3	6	2	0
{Urinary system}						
kidney			<40>	<44>	<41>	<39>
	leukemic cell infiltration		0	1	0	0
{Endocrine system}						
adrenal			<40>	<44>	<41>	<39>
	leukemic cell infiltration		0	0	1	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

APPENDIX O 4

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

RAT : FEMALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 2

Group Name No. of Animals on Study		Control 38	320 ppm 35	800 ppm 39	2000 ppm 34
Organ	Findings				
{Respiratory system}					
lung		<38>	<35>	<39>	<34>
	leukemic cell infiltration	2	2	1	0
	metastasis:uterus tumor	1	0	0	0
	metastasis:adrenal tumor	0	0	1	0
	metastasis:thyroid tumor	1	0	0	0
{Hematopoietic system}					
bone marrow		<38>	<35>	<39>	<34>
	leukemic cell infiltration	2	1	1	0
lymph node		<38>	<35>	<39>	<34>
	leukemic cell infiltration	0	0	1	0
{Digestive system}					
liver		<38>	<35>	<39>	<34>
	leukemic cell infiltration	2	2	1	0
	metastasis:adrenal tumor	0	0	1	0
{Reproductive system}					
uterus		<38>	<35>	<39>	<34>
	leukemic cell infiltration	1	0	0	0
{Nervous system}					
brain		<38>	<35>	<39>	<34>
	metastasis:pituitary tumor	1	0	0	0
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

APPENDIX O 5

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

RAT : MALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

		Group Name No. of Animals on Study	Control 10	320 ppm 6	800 ppm 9	2000 ppm 11
Organ	Findings					
{Respiratory system}						
nasal cavit			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		0	0	2	1
lung			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		2	1	3	0
	metastasis:bone tumor		0	1	1	0
	metastasis:kidney tumor		0	0	0	1
{Hematopoietic system}						
bone marrow			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		2	2	3	1
lymph node			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		1	2	1	0
	metastasis:kidney tumor		0	0	0	1
{Circulatory system}						
heart			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		0	1	1	0
{Digestive system}						
liver			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		2	0	3	1
{Urinary system}						
kidney			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		0	0	2	1
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0328
 ANIMAL : RAT F344/DuCrJ
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

		Group Name No. of Animals on Study	Control 10	320 ppm 6	800 ppm 9	2000 ppm 11
Organ	Findings					
{Endocrine system}						
pituitary			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		0	0	2	1
adrenal			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		0	0	2	1
{Nervous system}						
brain			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		0	0	2	1
spinal cord			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		0	0	2	1
{Musculoskeletal system}						
muscle			<10>	< 6>	< 9>	<11>
	leukemic cell infiltration		0	1	0	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

(JPT150)

BAIS3

APPENDIX O 6

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

RAT : FEMALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 3

		Group Name	Control	320 ppm	800 ppm	2000 ppm
		No. of Animals on Study	12	15	11	16
Organ	Findings					
{Integumentary system/appandage}						
skin/app			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	0	1	0
{Respiratory system}						
nasal cavit			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	0	2	1
lung			<12>	<15>	<11>	<16>
	leukemic cell infiltration		3	7	2	3
	metastasis:uterus tumor		0	1	2	1
	metastasis:adrenal tumor		1	0	0	0
	metastasis:bone tumor		0	0	0	1
	metastasis:ovary tumor		0	1	0	0
	metastasis:mammary gland tumor		0	0	0	1
	metastasis:retroperitoneum tumor		0	0	1	0
	metastasis:urinary bladder tumor		0	0	1	0
{Hematopoietic system}						
bone marrow			<12>	<15>	<11>	<16>
	leukemic cell infiltration		3	6	2	4
lymph node			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	4	2	1
	metastasis:uterus tumor		0	1	0	0

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

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 4

		Group Name No. of Animals on Study	Control 12	320 ppm 15	800 ppm 11	2000 ppm 16
Organ	Findings					
{Hematopoietic system}						
lymph node	metastasis:ovary tumor		<12> 0	<15> 1	<11> 0	<16> 0
{Circulatory system}						
heart	leukemic cell infiltration		<12> 0	<15> 0	<11> 2	<16> 1
{Digestive system}						
liver	leukemic cell infiltration		<12> 3	<15> 7	<11> 2	<16> 4
	metastasis:uterus tumor		0	1	1	1
pancreas	leukemic cell infiltration		<12> 0	<15> 1	<11> 0	<16> 0
	metastasis:ovary tumor		0	1	0	0
	metastasis:urinary bladder tumor		0	0	1	0
{Urinary system}						
kidney	leukemic cell infiltration		<12> 0	<15> 2	<11> 2	<16> 2
	metastasis:uterus tumor		0	1	1	0
	metastasis:urinary bladder tumor		0	0	1	0
urin bladd	metastasis:uterus tumor		<12> 0	<15> 1	<11> 0	<16> 0

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

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

Organ	Findings	Group Name No. of Animals on Study	Control 12	320 ppm 15	800 ppm 11	2000 ppm 16
{Endocrine system}						
pituitary			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	1	0	1
adrenal			<12>	<15>	<11>	<16>
	leukemic cell infiltration		1	0	2	1
{Reproductive system}						
ovary			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	1	2	1
uterus			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	1	1	1
	metastasis:urinary bladder tumor		0	0	1	0
{Nervous system}						
brain			<12>	<15>	<11>	<16>
	leukemic cell infiltration		1	4	2	3
	metastasis:pituitary tumor		0	1	0	0
spinal cord			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	4	1	3
{Special sense organs/appendage}						
Harder gl			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	0	1	0
{Musculoskeletal system}						
muscle			<12>	<15>	<11>	<16>
	leukemic cell infiltration		0	0	1	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0328
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 6

		Group Name	Control	320 ppm	800 ppm	2000 ppm
		No. of Animals on Study	12	15	11	16
Organ_____	Findings_____					
{Body cavities}						
mediastinum			<12>	<15>	<11>	<16>
	metastasis:urinary bladder tumor		0	0	1	0
peritoneum			<12>	<15>	<11>	<16>
	metastasis:uterus tumor		0	0	1	1
	metastasis:ovary tumor		1	0	0	0
	metastasis:urinary bladder tumor		0	0	1	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					
(JPT150)						

BAIS3

APPENDIX P 1

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

IDENTITY OF 1,4-DICHLORO-2-NITROBENZENE IN THE 2-YEAR FEED STUDY

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

Lot No. : WTR1850

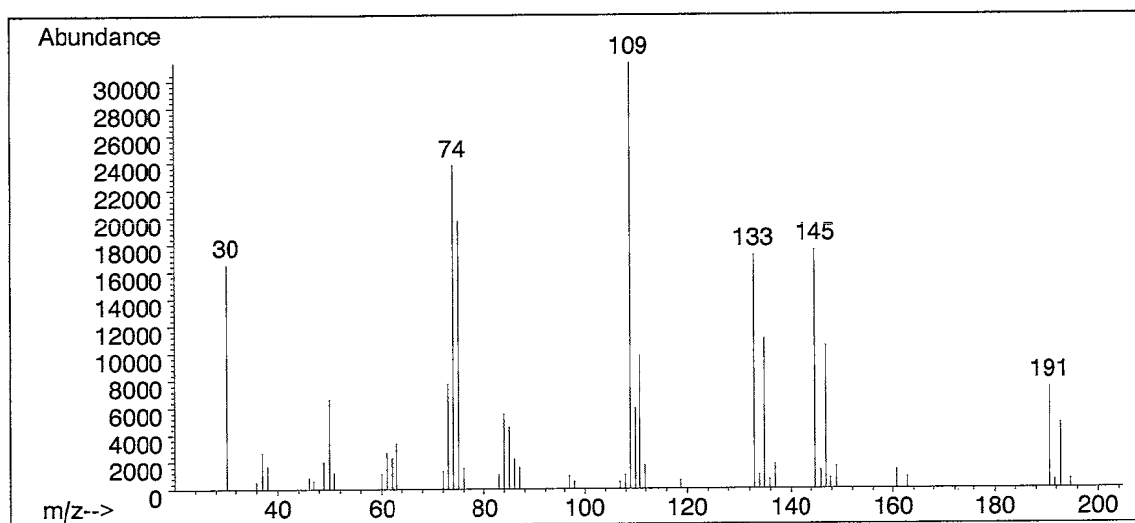
1. Spectral Data

Mass Spectrometry

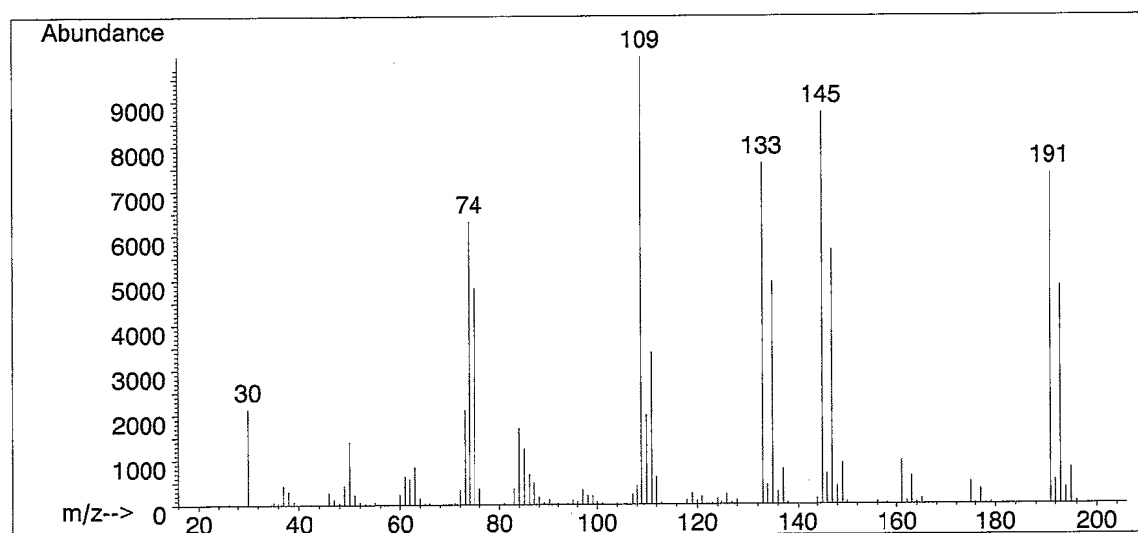
Instrument : Hewlett Packard 5989B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance



Mass Spectrum of Literature Data*

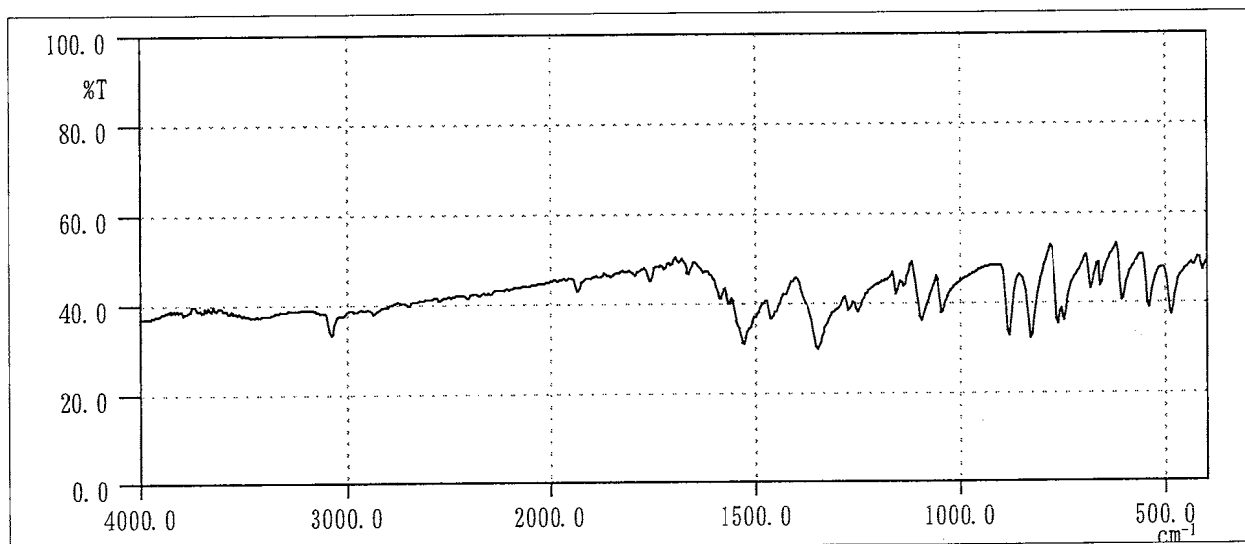
Results: The mass spectrum was consistent with literature spectrum.

(*Fred W. McLafferty (1994) Wiley Registry of Mass Spectral Data, 6th edition.
John Wiley and Sons, Inc. (U.S.), Entry Number 74222)

Infrared Spectrometry

Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr

Resolution : 2 cm^{-1} 

Infrared Spectrum of Test Substance

<u>Determined Values</u>	<u>Literature Values</u> *
Wave Number (cm^{-1})	Wave Number (cm^{-1})
460~ 510	460~ 510
510~ 560	510~ 560
560~ 620	560~ 620
620~ 670	620~ 670
670~ 690	670~ 690
690~ 790	690~ 790
790~ 850	790~ 850
850~ 900	850~ 900
900~1060	900~1060
1060~1120	1060~1120
1120~1170	1120~1170
1170~1180	1170~1180
1180~1260	1180~1260
1260~1280	1260~1280
1280~1400	1280~1400
1400~1470	1400~1470
1470~1580	1470~1580
1580~1600	1580~1600
1650~1690	1650~1690
1750~1780	1750~1780
1780~1810	1780~1810
1900~1950	1900~1950
3000~3100	3000~3100

Results: The infrared spectrum was consistent with literature spectrum.

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

2. Conclusions: The test substance was identified as 1,4-dichloro-2-nitrobenzene by the mass spectrum and the infrared spectrum.

APPENDIX P 2

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

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

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

Lot No. : WTR1850

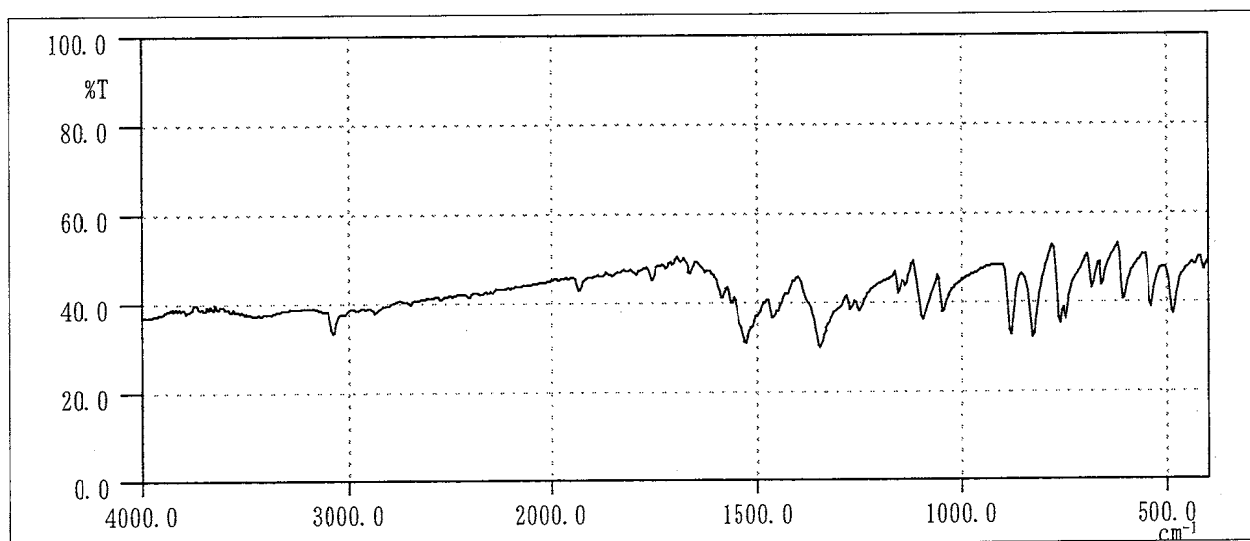
1. Sample : This lot was used from 1997.2.13 to 1999.2.17. Test substance was stored in a dark place at room temperature.

2. Infrared Spectrometry

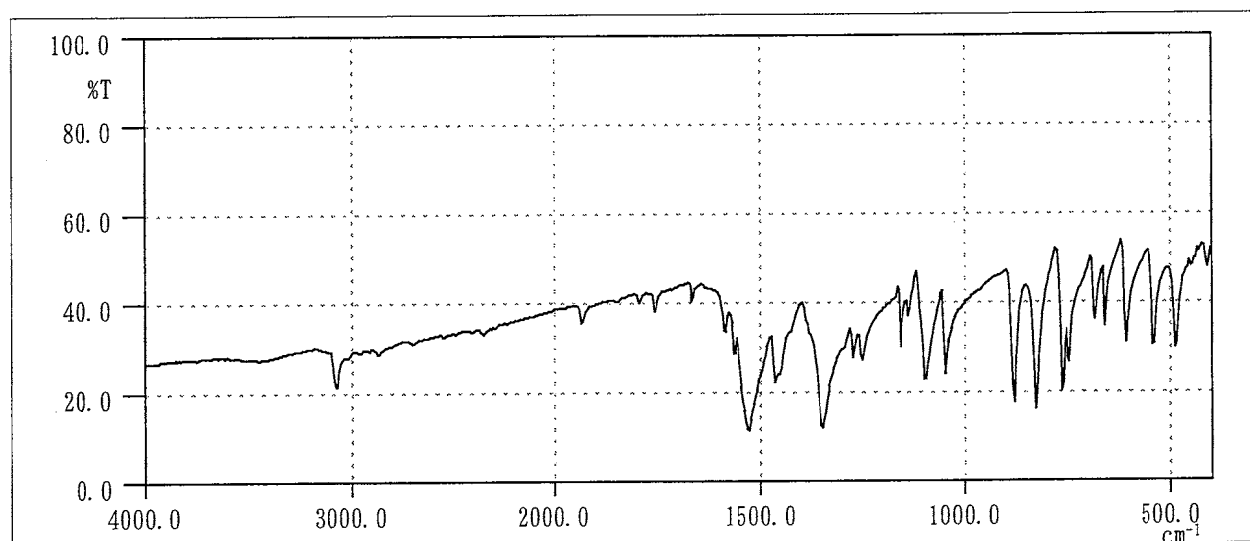
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr

Resolution : 2 cm^{-1}



Infrared Spectrum of Test Substance (date analyzed : 1997.02.12)



Infrared Spectrum of Test Substance (date analyzed : 1999.03.16)

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

3. Gas Chromatography

Instrument : Hewlett Packard 5890A Gas Chromatograph
Column : Methyl Silicone (0.2 mm ϕ \times 50m)
Column Temperature : 80 °C \rightarrow (10 °C/min) \rightarrow 220 °C (3 min)
Flow Rate : 1 mL/min
Detector : FID (Flame Ionization Detector)
Injection Volume : 1 μ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
1997.02.12	1	9.063	100
1999.03.15	1	9.066	100

Results: Gas chromatography indicated one major peak (peak No.1) analyzed on 1997.2.12 and one major peak (peak No.1) analyzed on 1999.3.15. No new trace impurity peak in the test substance analyzed on 1999.3.15 was detected.

4. Conclusions: The test substance was stable for about 2 years in a dark place at room temperature.

APPENDIX P 3

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

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

Date Analyzed	Target Concentration		
	320 ^a	800	2000
1997.02.12	321.4 (100.4) ^b	751.9 (94.0)	1799.9 (90.0)
1997.05.07	326.1 (101.9)	762.8 (95.4)	1838.4 (91.9)
1997.07.30	312.7 (97.7)	770.0 (96.3)	1881.5 (94.1)
1997.10.22	316.8 (99.0)	767.7 (96.0)	1877.1 (93.9)
1998.01.14	330.1 (103.2)	796.7 (99.6)	1983.5 (99.2)
1998.04.08	349.2 (109.1)	739.2 (92.4)	1840.1 (92.0)
1998.07.01	326.7 (102.1)	753.2 (94.2)	1793.5 (89.7)
1998.10.07	297.7 (93.0)	763.6 (95.5)	1837.9 (91.9)
1998.12.16	314.1 (98.2)	722.3 (90.3)	1828.0 (91.4)

^a ppm

^b %

Analytical Method : The samples were analyzed by gas chromatography.

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : Methyl Silicone (0.2 mm ϕ \times 50m)

Column Temperature : 80 °C \rightarrow (15 °C/min) \rightarrow 250 °C \rightarrow (20 °C/min) \rightarrow 280 °C (3 min)

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

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

	Target Concentration		
	320 ^a	800	2000
Coefficient Variation	12.84 ^b	5.47	3.42

^a ppm

^b % (n=7)

Analytical Method : The samples were analyzed by gas chromatography.

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : Methyl Silicone (0.2 mm ϕ \times 50m)

Column Temperature : 80 °C \rightarrow (15 °C/min) \rightarrow 250 °C \rightarrow (20 °C/min) \rightarrow 280 °C (3 min)

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

APPENDIX P 4

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

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

Date Prepared	Date Analyzed	Target Concentration	
		320 ^a	2000
1997.01.23	1997.01.23	318.0 (100) ^b	1969.8 (100)
	1997.01.31 ^c	312.0 (98.1)	1828.4 (92.8)
	1997.01.31 ^d	308.4 (97.0)	1808.9 (91.8)
	1997.02.07 ^c	291.4 (91.6)	1724.5 (87.5)
	1997.02.07 ^d	294.1 (92.5)	1728.7 (87.8)

^a ppm

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

^c Animal room samples

^d Cold storage samples

Analytical Method : The samples were analyzed by gas chromatography.

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : Methyl Silicone (0.2 mm ϕ \times 50m)

Column Temperature : 80 °C \rightarrow (15 °C/min) \rightarrow 250 °C \rightarrow (20 °C/min) \rightarrow 280 °C (3 min)

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

APPENDIX Q 1

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

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

Item	Method
Hematology	
Red blood cell (RBC)	Light scattering method ¹⁾
Hemoglobin (Hgb)	Cyanmethemoglobin method ¹⁾
Methemoglobin	Multiple-wavelength Spectrophotometric method ⁴⁾
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⁾ (Wright 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 ⁵⁾

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

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

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

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

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

APPENDIX Q 2

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

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

Item	Unit	Decimal place
Hematology		
Red blood cell (RBC)	$\times 10^6 / \mu\text{L}$	2
Hemoglobin	g/dL	1
Methemoglobin	%	1
Hematocrit	%	1
Mean corpuscular volume (MCV)	fL	1
Mean corpuscular hemoglobin (MCH)	pg	1
Mean corpuscular hemoglobin concentration (MCHC)	g/dL	1
Platelet	$\times 10^3 / \mu\text{L}$	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