

β -クロロプロピオン酸のラット及びマウスを用いた
経口投与によるがん原性試験(混水試験)報告書

試験番号

ラット/0141 ; マウス/0140

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TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS
IN THE DRINKING WATER STUDIES OF β - CHLOROPROPIONIC ACID

Two-year studies

<Method of Administration>

Drinking water

<Number of Groups>

Male 4, Female 4

<Size of Groups>

50 males and 50 females of each group

<Animals>

Strain and Species

F344/DuCrj(Fischer) rat

Crj:BDF1 mouse

Animal Source

Charles River Japan, Inc.

Duration Held Before Study

2 wk

Age When Placed on Study

6 wk

Age When Killed

110 ~ 111 wk

<Doses>

Rat--- <Male> 0, 800, 2400 or 7200 ppm

<Female> 0, 800, 2400 or 7200 ppm

Mouse- <Male> 0, 250, 1000 or 4000 ppm

<Female> 0, 1000, 4000 or 16000 ppm

<Duration of Dosing>

7d/wk for 104wk

<Animal Maintenance>

Feed

CRF-1 (Oriental Yeast Co., Ltd.)

Sterilized by γ - ray

Available *ad libitum*

Water

Filtrated and sterilized by ultraviolet ray

Automatic watering system in duration of quarantine

Glass bottle in duration of acclimation and administration

Available *ad libitum*

Animal per Cage

Single (stainless steel wire)

Animal Room Environment

Barrier system

Temperature : 24 ± 2 °C

Humidity : $55 \pm 10\%$

Fluorescent light 12h/d

15-17 room air changes /h

<Type and Frequency of Observation>

Clinical Sign

Observed 1 per d

Body Weight

Weighed 1 per wk for 14wk

Weighed 1 per 2wks thereafter

Food Consumption

Weighed 1 per wk for 14wk

Weighed 1 per 4wks thereafter

Water Consumption

Weighed 2 per wk for 14wk

Weighed 1 per 2wks thereafter

TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES IN MALE RAT
(TWO-YEAR STUDY)

Week on Study	Control		800 ppm			2400 ppm			7200 ppm		
	Au.Wt.	No.of Surviv. <50>	Au.Wt.	% of cont. <50>	No.of Surviv.	Au.Wt.	% of cont. <50>	No.of Surviv.	Au.Wt.	% of cont. <50>	No.of Surviv.
0	129 (50)	50/50	129 (50)	100	50/50	129 (50)	100	50/50	129 (50)	100	50/50
1	169 (50)	50/50	166 (50)	98	50/50	163 (50)	96	50/50	157 (50)	93	50/50
2	203 (50)	50/50	200 (50)	99	50/50	198 (50)	98	50/50	187 (50)	92	50/50
3	231 (50)	50/50	228 (50)	99	50/50	226 (50)	98	50/50	213 (50)	92	50/50
4	250 (50)	50/50	248 (50)	99	50/50	246 (50)	98	50/50	232 (50)	93	50/50
5	268 (50)	50/50	266 (50)	99	50/50	263 (50)	98	50/50	248 (50)	93	50/50
6	283 (50)	50/50	280 (50)	99	50/50	276 (50)	98	50/50	258 (50)	91	50/50
7	298 (50)	50/50	296 (50)	99	50/50	290 (50)	97	50/50	269 (50)	90	50/50
8	310 (50)	50/50	308 (50)	99	50/50	302 (50)	97	50/50	279 (50)	90	50/50
9	320 (50)	50/50	319 (50)	100	50/50	312 (50)	98	50/50	288 (50)	90	50/50
10	328 (50)	50/50	327 (50)	100	50/50	318 (50)	97	50/50	293 (50)	89	50/50
11	336 (50)	50/50	335 (50)	100	50/50	326 (50)	97	50/50	300 (50)	89	50/50
12	341 (50)	50/50	341 (50)	100	50/50	331 (50)	97	50/50	303 (50)	89	50/50
13	348 (50)	50/50	348 (50)	100	50/50	336 (50)	97	50/50	308 (50)	89	50/50
14	353 (50)	50/50	352 (50)	100	50/50	340 (50)	96	50/50	311 (50)	88	50/50
16	362 (50)	50/50	358 (50)	99	50/50	347 (50)	96	50/50	317 (50)	88	50/50
18	368 (50)	50/50	365 (50)	99	50/50	354 (50)	96	50/50	323 (50)	88	50/50
20	376 (50)	50/50	372 (50)	99	50/50	361 (50)	96	50/50	329 (50)	88	50/50
22	384 (50)	50/50	380 (50)	99	50/50	368 (50)	96	50/50	335 (50)	87	50/50
24	391 (50)	50/50	387 (50)	99	50/50	374 (50)	96	50/50	340 (50)	87	50/50
26	399 (50)	50/50	394 (50)	99	50/50	381 (50)	95	50/50	345 (50)	86	50/50
28	406 (50)	50/50	399 (50)	98	50/50	386 (50)	95	50/50	350 (50)	86	50/50
30	410 (50)	50/50	405 (50)	99	50/50	391 (50)	95	50/50	356 (50)	87	50/50
32	417 (50)	50/50	411 (50)	99	50/50	396 (50)	95	50/50	360 (50)	86	50/50
34	423 (50)	50/50	418 (50)	99	50/50	402 (50)	95	50/50	364 (50)	86	50/50
36	429 (50)	50/50	422 (50)	98	50/50	406 (50)	95	50/50	369 (49)	86	49/50
38	433 (50)	50/50	427 (50)	99	50/50	410 (50)	95	50/50	372 (49)	86	49/50
40	436 (50)	50/50	429 (50)	98	50/50	412 (50)	94	50/50	373 (49)	86	49/50
42	441 (50)	50/50	433 (50)	98	50/50	415 (50)	94	50/50	376 (49)	85	49/50
44	446 (50)	50/50	437 (50)	98	50/50	420 (50)	94	50/50	379 (49)	85	49/50
46	452 (50)	50/50	443 (50)	98	50/50	424 (49)	94	49/50	382 (49)	85	49/50
48	456 (50)	50/50	447 (50)	98	50/50	428 (49)	94	49/50	385 (49)	84	49/50
50	460 (50)	50/50	451 (50)	98	50/50	431 (49)	94	49/50	389 (49)	85	49/50
52	463 (50)	50/50	453 (50)	98	50/50	432 (49)	93	49/50	390 (49)	84	49/50
54	468 (50)	50/50	458 (50)	98	50/50	436 (49)	93	49/50	392 (49)	84	49/50
56	470 (50)	50/50	461 (50)	98	50/50	438 (49)	93	49/50	394 (49)	84	49/50
58	474 (50)	50/50	464 (50)	98	50/50	442 (49)	93	49/50	396 (49)	84	49/50
60	477 (50)	50/50	468 (50)	98	50/50	444 (49)	93	49/50	397 (49)	83	49/50
62	480 (50)	50/50	469 (50)	98	50/50	444 (49)	93	49/50	398 (49)	83	49/50
64	483 (50)	50/50	472 (50)	98	50/50	447 (49)	93	49/50	400 (49)	83	49/50
66	486 (50)	50/50	475 (50)	98	50/50	449 (49)	92	49/50	400 (49)	82	49/50
68	484 (50)	50/50	471 (50)	97	50/50	446 (49)	92	49/50	398 (49)	82	49/50
70	485 (50)	50/50	472 (50)	97	50/50	447 (49)	92	49/50	399 (49)	82	49/50
72	482 (50)	50/50	469 (50)	97	50/50	445 (49)	92	49/50	397 (49)	82	49/50
74	479 (50)	49/50	466 (50)	97	50/50	445 (49)	93	49/50	397 (49)	83	49/50
76	478 (48)	48/50	468 (49)	98	49/50	443 (49)	93	49/50	397 (49)	83	49/50
78	479 (48)	48/50	470 (49)	98	49/50	445 (49)	93	49/50	397 (48)	83	48/50
80	477 (48)	48/50	469 (49)	98	49/50	443 (48)	93	48/50	395 (48)	83	48/50
82	474 (47)	45/50	470 (49)	99	49/50	445 (48)	94	48/50	395 (48)	83	48/50
84	481 (44)	44/50	471 (49)	98	49/50	443 (48)	92	48/50	392 (47)	81	47/50
86	481 (43)	43/50	472 (49)	98	49/50	444 (48)	92	48/50	396 (45)	82	46/50
88	480 (42)	42/50	469 (48)	98	48/50	443 (48)	92	48/50	397 (45)	83	45/50
90	480 (41)	41/50	465 (48)	97	48/50	441 (48)	92	48/50	393 (45)	82	44/50
92	479 (40)	40/50	462 (47)	96	47/50	439 (47)	92	47/50	390 (44)	81	44/50
94	474 (40)	40/50	463 (45)	98	45/50	436 (47)	92	46/50	388 (44)	82	44/50
96	470 (40)	40/50	458 (43)	97	43/50	436 (45)	93	45/50	386 (44)	82	44/50
98	467 (39)	39/50	457 (43)	98	43/50	434 (45)	93	45/50	382 (44)	82	44/50
100	461 (39)	39/50	452 (43)	98	43/50	428 (45)	93	45/50	382 (44)	83	44/50
102	451 (38)	37/50	447 (43)	99	43/50	426 (44)	94	44/50	377 (44)	84	44/50
104	447 (36)	36/50	438 (43)	98	43/50	416 (43)	93	43/50	377 (42)	84	42/50

< >:No.of effective animals,():No.of measured animals Au.Wt.: g

TABLE 3 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES IN FEMALE RAT
(TWO--YEAR STUDY)

Week on Study	Control		800 ppm			2400 ppm			7200 ppm		
	Au.Wt.	No.of Surviv. <50>	Au.Wt.	% of cont. <50>	No.of Surviv.	Au.Wt.	% of cont. <50>	No.of Surviv.	Au.Wt.	% of cont. <50>	No.of Surviv.
0	104 (50)	50/50	103 (50)	99	50/50	103 (50)	99	50/50	104 (50)	100	50/50
1	124 (50)	50/50	123 (50)	99	50/50	122 (50)	98	50/50	118 (50)	95	50/50
2	140 (50)	50/50	139 (50)	99	50/50	138 (50)	99	50/50	134 (50)	96	50/50
3	151 (50)	50/50	152 (50)	101	50/50	149 (50)	99	50/50	144 (50)	95	50/50
4	160 (50)	50/50	161 (50)	101	50/50	158 (50)	99	50/50	151 (50)	94	50/50
5	168 (50)	50/50	170 (50)	101	50/50	166 (50)	99	50/50	158 (50)	94	50/50
6	176 (50)	50/50	177 (50)	101	50/50	173 (50)	98	50/50	163 (50)	93	50/50
7	182 (50)	50/50	184 (50)	101	50/50	179 (50)	98	50/50	168 (50)	92	50/50
8	187 (50)	50/50	189 (50)	101	50/50	185 (50)	99	50/50	172 (50)	92	50/50
9	192 (50)	50/50	195 (50)	102	50/50	189 (50)	98	50/50	176 (50)	92	50/50
10	195 (50)	50/50	197 (50)	101	50/50	192 (50)	98	50/50	178 (50)	91	50/50
11	197 (50)	50/50	202 (50)	103	50/50	196 (50)	99	50/50	183 (50)	93	50/50
12	198 (50)	50/50	201 (50)	102	50/50	195 (50)	98	50/50	182 (50)	92	50/50
13	202 (50)	50/50	206 (50)	102	50/50	200 (50)	99	50/50	186 (50)	92	50/50
14	205 (50)	50/50	208 (50)	101	50/50	202 (50)	99	50/50	188 (50)	92	50/50
16	205 (50)	50/50	209 (50)	102	50/50	203 (50)	99	50/50	188 (50)	92	50/50
18	209 (50)	50/50	211 (50)	101	50/50	205 (50)	98	50/50	189 (50)	90	50/50
20	213 (50)	50/50	215 (50)	101	50/50	207 (50)	97	50/50	191 (50)	90	50/50
22	216 (50)	50/50	217 (50)	100	50/50	210 (50)	97	50/50	194 (50)	90	50/50
24	219 (50)	50/50	222 (50)	101	50/50	213 (50)	97	50/50	198 (50)	90	50/50
26	222 (50)	50/50	225 (50)	101	50/50	216 (50)	97	50/50	200 (50)	90	50/50
28	225 (50)	50/50	228 (50)	101	50/50	219 (50)	97	50/50	202 (50)	90	50/50
30	227 (50)	50/50	230 (50)	101	50/50	221 (50)	97	50/50	204 (50)	90	50/50
32	231 (50)	50/50	234 (50)	101	50/50	224 (50)	97	50/50	205 (50)	89	50/50
34	233 (50)	50/50	236 (50)	101	50/50	227 (50)	97	50/50	208 (50)	89	50/50
36	235 (50)	50/50	240 (50)	102	50/50	230 (50)	98	50/50	210 (50)	89	50/50
38	238 (50)	50/50	242 (50)	102	50/50	233 (50)	98	50/50	212 (50)	89	50/50
40	240 (50)	50/50	244 (50)	102	50/50	234 (50)	98	50/50	212 (50)	88	50/50
42	245 (50)	50/50	248 (50)	101	50/50	236 (50)	96	50/50	215 (50)	88	50/50
44	247 (50)	50/50	251 (50)	102	50/50	239 (50)	97	50/50	217 (50)	88	50/50
46	249 (50)	50/50	256 (50)	103	50/50	243 (50)	98	50/50	220 (50)	88	50/50
48	254 (50)	50/50	259 (50)	102	50/50	247 (50)	97	50/50	222 (50)	87	50/50
50	259 (50)	50/50	264 (50)	102	50/50	251 (50)	97	50/50	226 (50)	87	50/50
52	261 (50)	50/50	268 (50)	103	50/50	252 (50)	97	50/50	226 (50)	87	50/50
54	266 (50)	50/50	273 (50)	103	50/50	256 (50)	96	50/50	228 (49)	86	49/50
56	268 (50)	50/50	276 (50)	103	50/50	260 (50)	97	50/50	231 (49)	86	49/50
58	275 (49)	49/50	282 (50)	103	50/50	265 (50)	96	50/50	234 (49)	85	49/50
60	278 (49)	49/50	287 (50)	103	50/50	269 (50)	97	50/50	236 (49)	85	49/50
62	283 (48)	48/50	292 (50)	103	50/50	273 (50)	96	50/50	238 (49)	84	49/50
64	287 (48)	48/50	296 (50)	103	50/50	277 (50)	97	50/50	242 (49)	84	49/50
66	291 (48)	48/50	300 (50)	103	50/50	281 (50)	97	50/50	244 (49)	84	49/50
68	291 (47)	47/50	299 (50)	103	50/50	281 (50)	97	50/50	243 (49)	84	49/50
70	291 (47)	47/50	301 (50)	103	50/50	283 (50)	97	50/50	245 (49)	84	49/50
72	294 (45)	45/50	303 (50)	103	50/50	286 (50)	97	50/50	245 (49)	83	49/50
74	298 (45)	45/50	304 (50)	102	50/50	289 (50)	97	50/50	248 (49)	83	48/50
76	303 (44)	44/50	307 (50)	101	50/50	291 (50)	96	50/50	251 (48)	83	48/50
78	310 (44)	44/50	308 (49)	99	49/50	295 (50)	95	50/50	257 (48)	83	48/50
80	311 (44)	44/50	309 (48)	99	48/50	296 (50)	95	50/50	257 (48)	83	48/50
82	316 (44)	44/50	310 (48)	98	48/50	299 (50)	95	50/50	260 (48)	82	48/50
84	320 (43)	43/50	311 (48)	97	48/50	302 (50)	94	50/50	260 (48)	81	48/50
86	324 (43)	43/50	312 (46)	96	45/50	303 (50)	94	50/50	263 (48)	81	48/50
88	324 (42)	42/50	314 (45)	97	45/50	306 (50)	94	50/50	265 (48)	82	48/50
90	326 (41)	41/50	321 (43)	98	43/50	308 (50)	94	50/50	267 (47)	82	47/50
92	325 (41)	41/50	321 (43)	99	43/50	310 (49)	95	49/50	268 (47)	82	47/50
94	327 (40)	40/50	321 (43)	98	43/50	310 (49)	95	49/50	269 (47)	82	47/50
96	327 (39)	39/50	321 (43)	98	43/50	310 (49)	95	49/50	270 (47)	83	47/50
98	333 (37)	37/50	322 (41)	97	41/50	312 (47)	94	47/50	269 (47)	81	47/50
100	336 (37)	37/50	319 (41)	95	41/50	314 (47)	93	47/50	270 (47)	80	47/50
102	334 (37)	37/50	320 (39)	96	39/50	314 (46)	94	45/50	269 (46)	81	46/50
104	330 (37)	37/50	316 (38)	96	38/50	313 (43)	95	43/50	267 (45)	81	45/50
< >:No.of effective animals,():No.of measured animals											
Au.Wt.: g											

< >:No.of effective animals,():No.of measured animals

Au.Wt.: g

TABLE 4 INCIDENCE AND TIME OF MASS OCCURRENCE IN CLINICAL OBSERVATION :RAT :MALE

Time of mass occurrence (week)		0~13	14~26	27~39	40~52	53~65	66~78	79~91	92~104	0~104
The kind of mass										
External mass	Control	0/50	0/50	0/50	2/50	3/50	6/50	13/48	12/40	16/50 (3/14)
	800 ppm	0/50	0/50	0/50	2/50	2/50	4/50	10/49	17/47	20/50 (4/ 7)
	2400 ppm	0/50	0/50	0/50	0/50	1/49	3/49	7/49	11/47	12/50 (2/ 7)
	7200 ppm	0/50	0/50	2/50	2/49	2/49	4/49	5/48	9/44	14/50 (3/ 8)
Internal mass										
	Control	0/50	0/50	0/50	0/50	0/50	0/50	0/48	1/40	1/50 (1/14)
	800 ppm	0/50	0/50	0/50	0/50	0/50	0/50	0/49	0/47	0/50 (0/ 7)
	2400 ppm	0/50	0/50	0/50	2/50	1/49	0/49	0/49	0/47	2/50 (1/ 7)
	7200 ppm	0/50	0/50	0/50	0/49	0/49	0/49	1/48	0/44	1/50 (1/ 8)

No. of animals with mass/No. of survival animals at first week on each period.
(No. of dead and moribund animals with mass/No. of dead and moribund animals.)

TABLE 5 INCIDENCE AND TIME OF MASS OCCURRENCE IN CLINICAL OBSERVATION :RAT :FEMALE

Time of mass occurrence (week)		0~13	14~26	27~39	40~52	53~65	66~78	79~91	92~104	0~104
The kind of mass										
External mass	Control	0/50	0/50	0/50	0/50	3/50	6/48	8/44	9/41	13/50 (5/13)
	800 ppm	0/50	1/50	1/50	3/50	1/50	5/50	5/49	11/43	16/50 (4/12)
	2400 ppm	0/50	0/50	0/50	1/50	2/50	2/50	5/50	5/49	7/50 (3/ 7)
	7200 ppm	0/50	1/50	0/50	0/50	1/50	2/49	3/48	4/47	8/50 (2/ 5)
Internal mass										
	Control	0/50	0/50	0/50	0/50	0/50	1/48	0/44	0/41	1/50 (1/13)
	800 ppm	0/50	0/50	0/50	0/50	0/50	0/50	1/49	1/43	2/50 (2/12)
	2400 ppm	0/50	0/50	0/50	0/50	0/50	0/50	0/50	1/49	1/50 (0/ 7)
	7200 ppm	0/50	0/50	0/50	1/50	2/50	1/49	0/48	1/47	3/50 (2/ 5)

No. of animals with mass/No. of survival animals at first week on each period.
(No. of dead and moribund animals with mass/No. of dead and moribund animals.)

TABLE 6 WATER CONSUMPTION IN MALE RAT(TWO-YEAR STUDY)

Week-Day on Study	Control		800 ppm			2400 ppm			7200 ppm		
	Au.WC.	No.of Surviv. <50>	Au.WC.	% of cont. <50>	No.of Surviv.	Au.WC.	% of cont. <50>	No.of Surviv.	Au.WC.	% of cont. <50>	No.of Surviv.
1-3	18.8 (50)	50/50	17.5 (50)	93	50/50	15.8 (50)	84	50/50	12.9 (50)	69	50/50
1-7	19.5 (50)	50/50	18.1 (50)	93	50/50	16.0 (50)	82	50/50	14.7 (50)	75	50/50
2-3	20.8 (50)	50/50	19.1 (50)	92	50/50	16.7 (50)	80	50/50	15.2 (50)	73	50/50
2-7	21.4 (50)	50/50	20.0 (50)	93	50/50	17.2 (50)	80	50/50	15.2 (50)	71	50/50
3-3	22.1 (50)	50/50	20.7 (50)	94	50/50	18.3 (50)	83	50/50	15.5 (50)	70	50/50
3-7	22.7 (49)	50/50	22.1 (50)	97	50/50	18.4 (49)	81	50/50	16.3 (50)	72	50/50
4-7	23.1 (50)	50/50	21.7 (50)	94	50/50	19.4 (50)	84	50/50	15.8 (50)	68	50/50
5-3	23.6 (50)	50/50	22.7 (50)	96	50/50	18.4 (50)	78	50/50	16.8 (50)	71	50/50
5-7	23.1 (50)	50/50	22.3 (49)	97	50/50	18.2 (50)	79	50/50	16.3 (50)	71	50/50
6-3	22.8 (50)	50/50	21.7 (50)	95	50/50	18.3 (50)	80	50/50	15.8 (50)	69	50/50
6-7	23.5 (50)	50/50	23.2 (50)	99	50/50	18.6 (49)	79	50/50	16.3 (50)	69	50/50
7-3	22.8 (50)	50/50	21.9 (50)	96	50/50	18.4 (50)	81	50/50	16.0 (50)	70	50/50
7-7	22.5 (50)	50/50	21.8 (50)	97	50/50	18.4 (50)	82	50/50	16.0 (50)	71	50/50
8-3	22.3 (49)	50/50	21.7 (50)	97	50/50	18.4 (50)	83	50/50	16.3 (50)	73	50/50
8-7	23.0 (50)	50/50	21.6 (49)	94	50/50	18.8 (50)	82	50/50	16.3 (50)	71	50/50
9-3	23.3 (50)	50/50	22.1 (50)	95	50/50	18.8 (50)	81	50/50	18.1 (50)	78	50/50
9-7	23.3 (50)	50/50	22.3 (50)	96	50/50	19.0 (50)	82	50/50	17.5 (50)	75	50/50
10-3	22.0 (50)	50/50	21.7 (50)	99	50/50	18.5 (50)	84	50/50	16.5 (50)	75	50/50
10-7	22.0 (50)	50/50	21.4 (50)	97	50/50	18.4 (50)	84	50/50	16.3 (50)	74	50/50
11-3	22.0 (50)	50/50	20.9 (50)	95	50/50	18.8 (50)	85	50/50	16.1 (50)	73	50/50
11-7	22.1 (50)	50/50	21.4 (50)	97	50/50	18.4 (50)	83	50/50	15.7 (50)	71	50/50
12-3	21.1 (50)	50/50	20.0 (50)	95	50/50	18.6 (50)	88	50/50	15.5 (50)	73	50/50
12-7	22.0 (50)	50/50	20.7 (50)	94	50/50	18.6 (50)	85	50/50	16.0 (49)	73	50/50
13-3	21.5 (50)	50/50	20.4 (50)	95	50/50	18.2 (50)	85	50/50	16.6 (50)	77	50/50
13-7	21.9 (50)	50/50	21.1 (49)	96	50/50	18.8 (49)	86	50/50	16.8 (50)	77	50/50
14-3	20.8 (50)	50/50	20.2 (50)	97	50/50	18.0 (50)	87	50/50	15.9 (50)	76	50/50
14-7	21.4 (50)	50/50	21.0 (49)	98	50/50	18.2 (49)	85	50/50	16.2 (49)	76	50/50
16-7	19.7 (50)	50/50	19.2 (50)	97	50/50	17.0 (50)	86	50/50	14.8 (50)	75	50/50
18-7	19.4 (50)	50/50	19.3 (50)	99	50/50	16.8 (50)	87	50/50	15.5 (50)	80	50/50
20-7	18.9 (50)	50/50	18.6 (50)	98	50/50	16.7 (50)	88	50/50	14.8 (50)	78	50/50
22-7	18.4 (50)	50/50	17.9 (50)	97	50/50	16.3 (50)	89	50/50	14.5 (50)	79	50/50
24-7	18.7 (50)	50/50	18.6 (50)	99	50/50	16.9 (50)	90	50/50	15.1 (50)	81	50/50
26-7	18.9 (50)	50/50	18.7 (50)	99	50/50	16.8 (50)	89	50/50	15.2 (50)	80	50/50
28-7	18.8 (50)	50/50	18.4 (50)	98	50/50	17.4 (50)	93	50/50	15.1 (50)	80	50/50
30-7	18.8 (50)	50/50	18.3 (50)	97	50/50	17.3 (50)	92	50/50	15.2 (50)	81	50/50
32-7	19.0 (50)	50/50	18.4 (50)	97	50/50	17.0 (50)	89	50/50	15.2 (49)	80	50/50
34-7	19.0 (50)	50/50	19.1 (50)	101	50/50	18.2 (50)	96	50/50	15.6 (50)	82	50/50
36-7	18.8 (50)	50/50	18.7 (50)	99	50/50	17.1 (50)	91	50/50	15.7 (49)	84	49/50
38-7	19.1 (50)	50/50	18.8 (50)	98	50/50	17.3 (50)	91	50/50	15.7 (49)	82	49/50
40-7	18.6 (50)	50/50	18.2 (50)	98	50/50	17.5 (50)	94	50/50	15.3 (49)	82	49/50
42-7	18.9 (50)	50/50	18.2 (50)	96	50/50	17.0 (50)	90	50/50	15.4 (49)	81	49/50
44-7	18.8 (50)	50/50	18.1 (50)	96	50/50	17.2 (50)	91	50/50	15.4 (49)	82	49/50
46-7	18.9 (50)	50/50	18.2 (50)	96	50/50	17.6 (49)	93	49/50	15.4 (49)	81	49/50
48-7	18.9 (50)	50/50	18.3 (50)	97	50/50	17.1 (49)	90	49/50	15.7 (49)	83	49/50
50-7	19.2 (50)	50/50	18.7 (50)	97	50/50	17.4 (49)	91	49/50	15.8 (49)	82	49/50
52-7	19.3 (50)	50/50	18.9 (49)	98	50/50	17.4 (49)	90	49/50	15.8 (49)	82	49/50
54-7	19.0 (50)	50/50	18.7 (50)	98	50/50	17.5 (49)	92	49/50	15.7 (49)	83	49/50
56-7	19.6 (50)	50/50	19.0 (50)	97	50/50	17.7 (49)	90	49/50	16.0 (49)	82	49/50
58-7	19.2 (50)	50/50	18.6 (50)	97	50/50	17.9 (49)	93	49/50	16.0 (49)	83	49/50
60-7	19.7 (50)	50/50	19.2 (50)	97	50/50	18.4 (49)	93	49/50	16.2 (49)	82	49/50
62-7	20.5 (50)	50/50	19.6 (50)	96	50/50	18.2 (49)	89	49/50	16.5 (49)	80	49/50
64-7	20.4 (50)	50/50	19.5 (50)	96	50/50	18.0 (49)	88	49/50	16.2 (49)	79	49/50
66-7	20.5 (50)	50/50	19.5 (50)	95	50/50	17.9 (49)	87	49/50	16.0 (49)	78	49/50
68-7	19.6 (50)	50/50	18.9 (50)	96	50/50	17.5 (49)	89	49/50	15.7 (49)	80	49/50
70-7	20.2 (50)	50/50	19.3 (50)	96	50/50	17.6 (49)	87	49/50	15.9 (49)	79	49/50
72-7	20.1 (50)	50/50	19.6 (50)	98	50/50	18.0 (49)	90	49/50	15.9 (49)	79	49/50
74-7	19.8 (50)	49/50	19.7 (50)	99	50/50	17.8 (49)	90	49/50	15.1 (49)	76	49/50
76-7	22.0 (48)	48/50	21.0 (49)	95	49/50	18.4 (49)	84	49/50	16.0 (49)	73	49/50
78-7	22.5 (48)	48/50	20.8 (49)	92	49/50	18.3 (49)	81	49/50	16.1 (49)	72	48/50
80-7	22.5 (48)	48/50	20.8 (49)	92	49/50	18.2 (48)	81	48/50	15.5 (48)	69	48/50
82-7	23.0 (47)	45/50	21.3 (49)	93	49/50	18.8 (48)	82	48/50	15.9 (48)	69	48/50
84-7	23.7 (44)	44/50	21.7 (49)	92	49/50	19.0 (48)	80	48/50	15.2 (47)	64	47/50
86-7	22.4 (43)	43/50	21.0 (49)	94	49/50	17.8 (48)	79	48/50	15.5 (46)	69	46/50
88-7	22.8 (41)	42/50	22.3 (48)	98	48/50	19.0 (48)	83	48/50	15.9 (45)	70	45/50
90-7	22.5 (41)	41/50	21.1 (48)	94	48/50	18.3 (48)	81	48/50	15.3 (45)	68	44/50
92-7	23.4 (39)	40/50	20.5 (46)	88	47/50	18.8 (47)	80	47/50	15.1 (42)	65	44/50
94-7	23.7 (40)	40/50	21.7 (45)	92	45/50	18.7 (47)	79	46/50	15.3 (44)	65	44/50
96-7	24.6 (40)	40/50	23.8 (40)	97	43/50	18.8 (42)	76	45/50	16.3 (44)	66	44/50
98-7	25.0 (39)	39/50	22.8 (43)	91	43/50	19.2 (45)	77	45/50	15.2 (44)	61	44/50
100-7	26.3 (39)	39/50	23.0 (42)	87	43/50	19.3 (45)	73	45/50	16.6 (44)	63	44/50
102-7	28.2 (38)	37/50	25.4 (42)	90	43/50	20.7 (43)	73	44/50	16.8 (44)	60	44/50
104-7	29.1 (34)	36/50	27.1 (42)	93	43/50	21.2 (42)	73	43/50	16.7 (42)	57	42/50

< >:No.of effective animals,():No.of measured animals

Au.WC.:g

TABLE 7 WATER CONSUMPTION IN FEMALE RAT(TWO-YEAR STUDY)

Week-Day on Study	Control		800 ppm			2400 ppm			7200 ppm		
	Au.WC.	No.of Surviv. <50>	Au.WC.	% of cont. <50>	No.of Surviv.	Au.WC.	% of cont. <50>	No.of Surviv.	Au.WC.	% of cont. <50>	No.of Surviv.
1-3	16.3 (50)	50/50	15.3 (50)	94	50/50	12.9 (50)	79	50/50	10.4 (50)	64	50/50
1-7	17.9 (49)	50/50	16.6 (50)	93	50/50	13.8 (50)	77	50/50	12.1 (50)	68	50/50
2-3	19.5 (50)	50/50	18.3 (50)	94	50/50	13.9 (50)	71	50/50	12.1 (50)	62	50/50
2-7	19.5 (48)	50/50	18.6 (50)	95	50/50	13.9 (50)	71	50/50	12.1 (50)	62	50/50
3-3	22.2 (50)	50/50	18.3 (50)	82	50/50	14.1 (50)	64	50/50	12.0 (50)	54	50/50
3-7	19.8 (44)	50/50	18.8 (48)	95	50/50	14.9 (50)	75	50/50	12.4 (50)	63	50/50
4-7	23.1 (49)	50/50	19.6 (48)	85	50/50	15.0 (50)	65	50/50	12.1 (50)	52	50/50
5-3	24.6 (48)	50/50	19.7 (50)	80	50/50	14.7 (50)	60	50/50	12.4 (50)	50	50/50
5-7	23.5 (46)	50/50	20.9 (50)	89	50/50	14.5 (50)	62	50/50	11.8 (50)	50	50/50
6-3	21.6 (48)	50/50	18.7 (50)	87	50/50	14.3 (49)	66	50/50	13.9 (50)	64	50/50
6-7	21.2 (43)	50/50	20.9 (49)	99	50/50	14.7 (50)	69	50/50	12.1 (50)	57	50/50
7-3	25.0 (49)	50/50	19.7 (50)	79	50/50	15.7 (50)	63	50/50	11.8 (50)	47	50/50
7-7	23.1 (48)	50/50	19.8 (49)	86	50/50	15.8 (50)	68	50/50	12.0 (50)	52	50/50
8-3	23.2 (49)	50/50	20.6 (50)	89	50/50	15.3 (50)	66	50/50	11.9 (50)	51	50/50
8-7	24.1 (48)	50/50	19.5 (50)	81	50/50	15.2 (50)	63	50/50	11.8 (50)	49	50/50
9-3	22.7 (48)	50/50	19.5 (50)	86	50/50	14.6 (50)	64	50/50	11.8 (50)	52	50/50
9-7	23.3 (48)	50/50	21.1 (50)	91	50/50	15.2 (50)	65	50/50	12.2 (50)	52	50/50
10-3	23.5 (50)	50/50	20.8 (48)	89	50/50	14.6 (50)	62	50/50	11.5 (50)	49	50/50
10-7	22.9 (47)	50/50	20.0 (50)	87	50/50	15.0 (50)	66	50/50	11.6 (50)	51	50/50
11-3	25.7 (49)	50/50	19.9 (50)	77	50/50	14.7 (50)	57	50/50	12.1 (50)	47	50/50
11-7	25.1 (48)	50/50	21.6 (48)	86	50/50	14.8 (50)	59	50/50	11.9 (50)	47	50/50
12-3	23.5 (49)	50/50	19.5 (50)	83	50/50	14.1 (50)	60	50/50	11.6 (50)	49	50/50
12-7	- (-)	50/50	- (-)	-	50/50	- (-)	-	50/50	- (-)	-	50/50
13-3	24.7 (50)	50/50	18.4 (50)	74	50/50	13.6 (50)	55	50/50	11.5 (50)	47	50/50
13-7	24.5 (45)	50/50	21.8 (49)	89	50/50	14.6 (50)	60	50/50	12.0 (48)	49	50/50
14-3	28.0 (46)	50/50	22.0 (50)	79	50/50	14.9 (50)	53	50/50	12.1 (50)	43	50/50
14-7	24.7 (42)	50/50	21.1 (50)	85	50/50	15.0 (50)	61	50/50	11.8 (50)	48	50/50
16-7	24.7 (49)	50/50	20.8 (50)	84	50/50	14.9 (50)	60	50/50	11.4 (50)	46	50/50
18-7	27.1 (49)	50/50	20.9 (50)	77	50/50	14.9 (50)	55	50/50	11.4 (50)	42	50/50
20-7	23.8 (46)	50/50	18.3 (50)	77	50/50	14.3 (49)	60	50/50	11.5 (50)	48	50/50
22-7	23.1 (49)	50/50	19.5 (50)	84	50/50	13.9 (50)	60	50/50	11.4 (50)	49	50/50
24-7	24.7 (47)	50/50	19.1 (49)	77	50/50	14.3 (50)	58	50/50	12.1 (50)	49	50/50
26-7	25.4 (49)	50/50	20.9 (50)	82	50/50	14.6 (50)	57	50/50	12.3 (50)	48	50/50
28-7	22.2 (49)	50/50	19.8 (50)	89	50/50	14.1 (50)	64	50/50	12.3 (50)	55	50/50
30-7	23.0 (48)	50/50	19.3 (50)	84	50/50	14.0 (50)	61	50/50	12.5 (50)	54	50/50
32-7	22.1 (49)	50/50	19.0 (50)	86	50/50	14.6 (50)	66	50/50	11.5 (50)	52	50/50
34-7	21.6 (47)	50/50	19.6 (50)	91	50/50	14.4 (50)	67	50/50	12.0 (50)	56	50/50
36-7	22.3 (50)	50/50	19.0 (50)	85	50/50	13.9 (50)	62	50/50	11.6 (50)	52	50/50
38-7	21.4 (49)	50/50	18.4 (48)	86	50/50	14.0 (50)	65	50/50	11.9 (50)	56	50/50
40-7	20.3 (50)	50/50	18.3 (50)	90	50/50	13.8 (50)	68	50/50	11.7 (50)	58	50/50
42-7	20.9 (49)	50/50	18.2 (50)	87	50/50	13.8 (50)	66	50/50	11.9 (50)	57	50/50
44-7	20.4 (50)	50/50	17.9 (50)	88	50/50	14.1 (50)	69	50/50	12.0 (50)	59	50/50
46-7	19.6 (50)	50/50	18.8 (50)	96	50/50	14.1 (50)	72	50/50	12.6 (50)	64	50/50
48-7	19.4 (49)	50/50	18.2 (50)	94	50/50	14.1 (50)	73	50/50	12.2 (50)	63	50/50
50-7	21.3 (50)	50/50	18.5 (50)	87	50/50	13.8 (50)	65	50/50	12.2 (50)	57	50/50
52-7	18.6 (50)	50/50	18.1 (50)	97	50/50	13.7 (50)	74	50/50	12.0 (50)	65	50/50
54-7	17.4 (50)	50/50	17.7 (50)	102	50/50	13.6 (50)	78	50/50	11.9 (49)	68	49/50
56-7	17.4 (50)	50/50	17.3 (49)	99	50/50	14.5 (50)	83	50/50	12.4 (49)	71	49/50
58-7	18.1 (49)	49/50	17.2 (50)	95	50/50	13.6 (50)	75	50/50	12.3 (49)	68	49/50
60-7	17.2 (49)	49/50	16.3 (50)	95	50/50	13.7 (50)	80	50/50	12.0 (48)	70	49/50
62-7	17.5 (47)	48/50	17.5 (50)	100	50/50	14.1 (50)	81	50/50	12.6 (49)	72	49/50
64-7	16.9 (48)	48/50	17.5 (50)	104	50/50	14.2 (50)	84	50/50	12.7 (49)	75	49/50
66-7	17.5 (48)	48/50	16.5 (50)	95	50/50	14.1 (50)	81	50/50	12.5 (49)	71	49/50
68-7	16.4 (47)	47/50	16.7 (50)	102	50/50	13.6 (50)	83	50/50	12.0 (49)	73	49/50
70-7	17.8 (47)	47/50	17.7 (50)	99	50/50	14.0 (50)	79	50/50	12.8 (49)	72	49/50
72-7	17.3 (46)	45/50	18.2 (50)	105	50/50	14.5 (50)	84	50/50	13.0 (49)	75	49/50
74-7	17.1 (45)	45/50	18.4 (50)	108	50/50	14.6 (50)	85	50/50	13.0 (49)	76	48/50
76-7	18.2 (44)	44/50	18.8 (50)	103	50/50	14.9 (50)	82	50/50	13.3 (48)	73	48/50
78-7	19.4 (44)	44/50	18.2 (49)	94	49/50	15.3 (50)	79	50/50	14.2 (48)	73	48/50
80-7	19.1 (44)	44/50	19.8 (48)	104	48/50	15.3 (50)	80	50/50	13.5 (48)	71	48/50
82-7	20.0 (44)	44/50	18.7 (48)	94	48/50	15.7 (50)	79	50/50	13.8 (48)	69	48/50
84-7	18.9 (43)	43/50	18.5 (48)	98	48/50	16.0 (50)	85	50/50	13.6 (48)	72	48/50
86-7	18.9 (43)	43/50	18.6 (46)	98	45/50	15.3 (50)	81	50/50	13.6 (48)	72	48/50
88-7	19.6 (41)	42/50	20.7 (44)	106	45/50	17.0 (50)	87	50/50	14.4 (48)	73	48/50
90-7	19.9 (41)	41/50	20.5 (43)	103	43/50	16.2 (50)	81	50/50	14.3 (47)	72	47/50
92-7	20.1 (41)	41/50	20.8 (43)	103	43/50	16.1 (49)	80	49/50	14.3 (47)	71	47/50
94-7	20.6 (40)	40/50	19.4 (43)	94	43/50	16.0 (49)	78	49/50	14.3 (47)	69	47/50
96-7	20.7 (39)	39/50	20.9 (43)	101	43/50	16.0 (49)	77	49/50	15.2 (47)	73	47/50
98-7	21.6 (37)	37/50	21.2 (41)	98	41/50	16.2 (47)	75	47/50	14.8 (47)	69	47/50
100-7	23.2 (37)	37/50	21.8 (41)	94	41/50	17.0 (47)	73	47/50	14.8 (47)	64	47/50
102-7	23.1 (37)	37/50	22.9 (38)	99	39/50	18.4 (46)	80	45/50	15.7 (46)	68	46/50
104-7	22.8 (37)	37/50	23.6 (38)	104	38/50	17.8 (41)	78	43/50	15.4 (45)	68	45/50

< >:No.of effective animals, ():No.of measured animals

Au.WC.: g

TABLE 8 FOOD CONSUMPTION IN MALE RAT(TWO-YEAR STUDY)

Week on Study	Control		800 ppm			2400 ppm			7200 ppm		
	Au.FC.	No.of Surviv. <50>	Au.FC.	% of cont. <50>	No.of Surviv.	Au.FC.	% of cont. <50>	No.of Surviv.	Au.FC.	% of cont. <50>	No.of Surviv.
1	15.2 (50)	50/50	14.7 (50)	97	50/50	14.1 (50)	93	50/50	13.0 (50)	86	50/50
2	17.0 (50)	50/50	16.6 (50)	98	50/50	16.0 (50)	94	50/50	14.3 (50)	84	50/50
3	17.3 (50)	50/50	17.0 (50)	98	50/50	16.9 (50)	98	50/50	15.4 (50)	89	50/50
4	17.4 (50)	50/50	17.2 (50)	99	50/50	17.2 (50)	99	50/50	16.5 (50)	95	50/50
5	17.3 (50)	50/50	16.9 (49)	98	50/50	16.7 (50)	97	50/50	15.5 (50)	90	50/50
6	17.5 (50)	50/50	17.3 (50)	99	50/50	16.8 (50)	96	50/50	15.4 (50)	88	50/50
7	17.5 (50)	50/50	17.3 (50)	99	50/50	17.1 (50)	98	50/50	15.4 (50)	88	50/50
8	17.7 (50)	50/50	17.8 (50)	101	50/50	17.0 (50)	96	50/50	15.7 (50)	89	50/50
9	17.8 (50)	50/50	17.8 (50)	100	50/50	17.3 (50)	97	50/50	16.1 (50)	90	50/50
10	17.4 (50)	50/50	17.6 (50)	101	50/50	16.6 (50)	95	50/50	15.5 (50)	89	50/50
11	17.2 (50)	50/50	17.2 (50)	100	50/50	16.7 (50)	97	50/50	15.6 (50)	91	50/50
12	17.0 (50)	50/50	16.9 (50)	99	50/50	16.4 (50)	96	50/50	15.2 (50)	89	50/50
13	16.8 (50)	50/50	16.7 (50)	99	50/50	16.1 (50)	96	50/50	15.2 (50)	90	50/50
14	16.4 (50)	50/50	16.4 (50)	100	50/50	15.8 (50)	96	50/50	14.7 (50)	90	50/50
18	16.5 (50)	50/50	16.7 (50)	101	50/50	15.9 (50)	96	50/50	15.3 (50)	93	50/50
22	16.3 (50)	50/50	16.3 (50)	100	50/50	15.8 (50)	97	50/50	14.9 (50)	91	50/50
26	16.3 (50)	50/50	16.2 (50)	99	50/50	16.0 (50)	98	50/50	15.2 (50)	93	50/50
30	16.8 (50)	50/50	16.4 (50)	98	50/50	15.8 (50)	94	50/50	15.3 (50)	91	50/50
34	16.4 (50)	50/50	16.8 (50)	102	50/50	16.1 (50)	98	50/50	15.1 (50)	92	50/50
38	16.5 (50)	50/50	16.2 (50)	98	50/50	16.1 (50)	98	50/50	15.4 (49)	93	49/50
42	16.6 (50)	50/50	16.6 (50)	100	50/50	16.4 (50)	99	50/50	15.6 (49)	94	49/50
46	16.6 (50)	50/50	16.4 (50)	99	50/50	16.1 (49)	97	49/50	15.1 (49)	91	49/50
50	16.8 (50)	50/50	16.7 (50)	99	50/50	16.2 (49)	96	49/50	15.4 (49)	92	49/50
54	16.7 (50)	50/50	16.9 (50)	101	50/50	16.2 (49)	97	49/50	15.2 (49)	91	49/50
58	17.1 (50)	50/50	16.9 (50)	99	50/50	16.7 (49)	98	49/50	15.4 (49)	90	49/50
62	16.7 (50)	50/50	16.5 (50)	99	50/50	16.0 (49)	96	49/50	14.8 (49)	89	49/50
66	16.7 (50)	50/50	16.5 (50)	99	50/50	15.9 (49)	95	49/50	14.7 (49)	88	49/50
70	16.9 (50)	50/50	16.7 (50)	99	50/50	16.1 (49)	95	49/50	15.3 (49)	91	49/50
74	16.9 (50)	49/50	17.3 (49)	102	50/50	16.6 (49)	98	49/50	15.2 (49)	90	49/50
78	17.4 (48)	48/50	17.3 (49)	99	49/50	16.6 (49)	95	49/50	15.7 (49)	90	48/50
82	17.8 (47)	45/50	17.8 (49)	100	49/50	17.3 (48)	97	48/50	15.7 (48)	88	48/50
86	17.6 (43)	43/50	17.7 (49)	101	49/50	16.6 (48)	94	48/50	15.5 (46)	88	46/50
90	17.5 (41)	41/50	17.6 (48)	101	48/50	16.5 (48)	94	48/50	15.4 (45)	88	44/50
94	17.4 (40)	40/50	17.6 (45)	101	45/50	16.4 (47)	94	46/50	15.3 (43)	88	44/50
98	17.2 (39)	39/50	17.3 (43)	101	43/50	16.2 (45)	94	45/50	14.8 (44)	86	44/50
102	17.3 (38)	37/50	17.9 (43)	103	43/50	16.5 (44)	95	44/50	15.0 (44)	87	44/50
104	17.2 (36)	36/50	17.1 (43)	99	43/50	16.1 (43)	94	43/50	15.0 (42)	87	42/50

< >:No.of effective animals,() :No.of measured animals

Au.FC.: g

TABLE 9 FOOD CONSUMPTION IN FEMALE RAT(TWO-YEAR STUDY)

Week on Study	Control		800 ppm		2400 ppm		7200 ppm				
	Au.F.C.	No.of Surviv. <50>	Au.F.C.	% of cont. <50>	No.of Surviv.	Au.F.C.	% of cont. <50>	No.of Surviv.	Au.F.C.	% of cont. <50>	No.of Surviv.
1	12.1 (50)	50/50	11.6 (50)	96	50/50	11.3 (50)	93	50/50	10.3 (50)	85	50/50
2	12.4 (50)	50/50	12.3 (50)	99	50/50	11.7 (50)	94	50/50	11.2 (50)	90	50/50
3	12.4 (50)	50/50	12.5 (50)	101	50/50	11.9 (50)	96	50/50	11.2 (50)	90	50/50
4	12.3 (50)	50/50	12.5 (50)	102	50/50	11.9 (50)	97	50/50	11.4 (50)	93	50/50
5	12.4 (50)	50/50	12.3 (50)	99	50/50	11.6 (50)	94	50/50	10.7 (50)	85	50/50
6	12.2 (50)	50/50	12.4 (50)	102	50/50	11.5 (50)	94	50/50	10.8 (50)	89	50/50
7	12.4 (33)	50/50	12.5 (50)	101	50/50	11.7 (50)	94	50/50	10.8 (50)	87	50/50
8	12.2 (50)	50/50	12.4 (50)	102	50/50	11.7 (50)	96	50/50	10.7 (50)	88	50/50
9	12.1 (50)	50/50	12.3 (50)	102	50/50	11.8 (50)	98	50/50	10.9 (50)	90	50/50
10	11.8 (50)	50/50	11.9 (50)	101	50/50	11.3 (50)	96	50/50	10.6 (50)	90	50/50
11	11.7 (50)	50/50	12.2 (50)	104	50/50	11.7 (50)	100	50/50	10.9 (50)	93	50/50
12	11.0 (50)	50/50	11.2 (50)	102	50/50	10.5 (50)	95	50/50	10.0 (50)	91	50/50
13	11.4 (50)	50/50	11.6 (50)	102	50/50	11.0 (50)	96	50/50	10.4 (50)	91	50/50
14	11.8 (50)	50/50	11.9 (50)	101	50/50	11.3 (50)	96	50/50	10.6 (50)	90	50/50
18	11.9 (50)	50/50	12.0 (50)	101	50/50	11.3 (49)	95	50/50	10.4 (50)	87	50/50
22	11.5 (50)	50/50	11.7 (50)	102	50/50	10.8 (50)	94	50/50	10.2 (50)	89	50/50
26	11.7 (50)	50/50	11.9 (50)	102	50/50	11.0 (50)	94	50/50	10.4 (50)	89	50/50
30	11.7 (50)	50/50	11.8 (50)	101	50/50	11.1 (50)	95	50/50	10.3 (50)	88	50/50
34	11.8 (50)	50/50	12.1 (50)	103	50/50	11.3 (48)	96	50/50	10.4 (50)	88	50/50
38	11.4 (50)	50/50	12.1 (50)	106	50/50	11.2 (50)	98	50/50	10.4 (50)	91	50/50
42	12.1 (50)	50/50	12.4 (50)	102	50/50	11.5 (50)	95	50/50	10.9 (50)	90	50/50
46	11.6 (50)	50/50	12.2 (50)	105	50/50	11.6 (50)	100	50/50	10.7 (50)	92	50/50
50	12.3 (50)	50/50	12.3 (50)	100	50/50	11.5 (50)	93	50/50	10.6 (50)	86	50/50
54	11.9 (50)	50/50	12.3 (50)	103	50/50	11.5 (50)	97	50/50	10.7 (50)	90	48/50
58	12.7 (49)	49/50	12.9 (50)	102	50/50	12.1 (50)	95	50/50	11.1 (49)	87	49/50
62	11.8 (49)	48/50	12.4 (50)	105	50/50	11.6 (50)	98	50/50	10.5 (49)	89	49/50
66	12.1 (48)	48/50	12.3 (50)	102	50/50	11.7 (50)	97	50/50	10.7 (49)	88	49/50
70	12.7 (46)	47/50	13.0 (50)	102	50/50	12.4 (50)	98	50/50	11.2 (49)	88	49/50
74	13.0 (45)	45/50	13.5 (50)	104	50/50	12.5 (50)	96	50/50	11.5 (49)	88	48/50
78	14.0 (44)	44/50	13.5 (49)	96	49/50	13.1 (50)	94	50/50	12.3 (48)	88	48/50
82	14.4 (44)	44/50	14.1 (48)	98	48/50	13.3 (50)	92	50/50	12.3 (48)	85	48/50
86	14.1 (43)	43/50	14.2 (47)	101	45/50	12.9 (50)	91	50/50	12.2 (48)	87	48/50
90	14.2 (42)	41/50	14.7 (43)	104	43/50	13.6 (50)	96	50/50	12.7 (47)	89	47/50
94	14.4 (40)	40/50	14.5 (43)	101	43/50	13.3 (49)	92	49/50	12.4 (47)	86	47/50
98	14.5 (37)	37/50	14.6 (41)	101	41/50	13.2 (47)	91	47/50	12.0 (47)	83	47/50
102	14.6 (37)	37/50	14.6 (39)	100	39/50	13.9 (45)	95	45/50	12.1 (45)	83	46/50
104	13.9 (37)	37/50	14.1 (38)	101	38/50	13.3 (43)	96	43/50	12.3 (45)	88	45/50
< >:No.of effective animals,():No.of measured animals Au.F.C.: g											

TABLE 10 NEOPLASTIC LESIONS (UTERUS) INCIDENCE AND STATISTICAL ANALYSIS : RAT : FEMALE

Group Name	Control	800 ppm	2400 ppm	7200 ppm
SITE : uterus TUMOUR : endometrial stromal polyp				
Tumor Rates				
Overall Rates(a)	5/50 (10.0)	5/50 (10.0)	8/50 (16.0)	13/50 (26.0)
Adjusted Rates(b)	11.11	11.63	22.22	31.58
Terminal Rates(c)	3/37 (8.1)	4/38 (10.5)	8/43 (18.6)	12/45 (26.7)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=1.0000 ?			
Prevalence Method(d)	P=0.0083**			
Combined analysis(d)	P=0.0148*			
Cochran-Armitage Test(e)	P=0.0113*			
Fisher Exact Test(e)		P=0.3710	P=0.3141	P=0.0676
SITE : uterus TUMOUR : endometrial stromal sarcoma				
Tumor Rates				
Overall Rates(a)	0/50 (0.0)	1/50 (2.0)	0/50 (0.0)	3/50 (6.0)
Adjusted Rates(b)	0.0	0.0	0.0	2.63
Terminal Rates(c)	0/37 (0.0)	0/38 (0.0)	0/43 (0.0)	1/45 (2.2)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=0.0859			
Prevalence Method(d)	P=0.1587			
Combined analysis(d)	P=0.0286*			
Cochran-Armitage Test(e)	P=0.0300*			
Fisher Exact Test(e)		P=0.4950	P=0.5000	P=0.1325
SITE : uterus TUMOUR : endometrial stromal polyp, endometrial stromal sarcoma				
Tumor Rates				
Overall Rates(a)	5/50 (10.0)	6/50 (12.0)	8/50 (16.0)	16/50 (32.0)
Adjusted Rates(b)	11.11	11.63	22.22	31.58
Terminal Rates(c)	3/37 (8.1)	4/38 (10.5)	8/43 (18.6)	13/45 (28.9)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=0.2063			
Prevalence Method(d)	P=0.0038**			
Combined analysis(d)	P=0.0027**			
Cochran-Armitage Test(e)	P=0.0013**			
Fisher Exact Test(e)		P=0.4872	P=0.3141	P=0.0238*

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

(b):Kaplan-Meire estimate tumor incidence at the end of 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 beyond the estimated P-value.

TABLE 11 NEOPLASTIC LESIONS (STOMACH) INCIDENCE AND STATISTICAL ANALYSIS : RAT : MALE

Group Name	Control	800 ppm	2400 ppm	7200 ppm
SITE : stomach				
TUMOUR : squamous cell papilloma, squamous cell carcinoma				
Tumor Rates				
Overall Rates(a)	0/50 (0.0)	0/50 (0.0)	1/50 (2.0)	3/50 (6.0)
Adjusted Rates(b)	0.0	0.0	5.88	9.09
Terminal Rates(c)	0/36 (0.0)	0/43 (0.0)	1/43 (2.3)	3/42 (7.1)
Statistical Analysis				
Peto Test				
Standard metod(d)	P=-----			
Prevalence method(d)	P=0.0114*			
Combined analysis(d)	P=-----			
Cochran-Armitage Test(e)	P=0.0139*			
Fisher Exact Test(e)		P=0.5000	P=0.4950	P=0.1325

TABLE 12 NEOPLASTIC LESIONS (PITUITARY GLAND) INCIDENCE AND STATISTICAL ANALYSIS : RAT : MALE

Group Name	Control	800 ppm	2400 ppm	7200 ppm
SITE : pituitary gland				
TUMOUR : adenoma				
Tumor Rates				
Overall Rates(a)	22/50 (44.0)	15/50 (30.0)	10/50 (20.0)	6/50 (12.0)
Adjusted Rates(b)	43.33	29.55	17.65	16.00
Terminal Rates(c)	14/36 (38.9)	12/43 (27.9)	7/43 (16.3)	4/42 (9.5)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=0.8041			
Prevalence Method(d)	P=0.9998			
Combined analysis(d)	P=0.9998			
Cochran-Armitage Test(e)	P=0.0008**			
Fisher Exact Test(e)		P=0.2145	P=0.0484*	P=0.0056**

SITE : pituitary gland				
TUMOUR : adenoma, adenocarcinoma				
Tumor Rates				
Overall Rates(a)	22/50 (44.0)	15/50 (30.0)	11/50 (22.0)	6/50 (12.0)
Adjusted Rates(b)	43.33	29.55	22.53	16.00
Terminal Rates(c)	14/36 (38.9)	12/43 (27.9)	8/43 (18.6)	4/42 (9.5)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=0.8041			
Prevalence Method(d)	P=0.9998			
Combined analysis(d)	P=0.9998			
Cochran-Armitage Test(e)	P=0.0008**			
Fisher Exact Test(e)		P=0.2145	P=0.0707	P=0.0056**

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

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

(c):Observed tumor incidence at terminal kill.

(d):~~Benet~~ 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.

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

TABLE 13 CAUSE OF DEATH :RAT

Group	Male				Female			
	Control	800ppm	2400ppm	7200ppm	Control	800ppm	2400ppm	7200ppm
Number of dead/moribund animal	14	7	7	8	13	12	7	5
No microscopical confirmation	0	0	1	0	0	0	0	0
Hematopoetic lesion	0	0	0	0	0	1	0	0
Cardiovascular lesion	0	1	0	0	0	0	0	0
Body cavity lesion	0	0	0	0	0	1	0	0
Other system lesion	0	0	1	0	0	0	0	0
Ileus	2	0	0	0	0	0	0	0
Chronic nephropathy	1	0	0	0	0	0	0	0
Tumor death : leukemia	2	2	1	2	3	2	3	2
: subcutis	0	1	1	3	2	1	0	0
: lung	0	0	0	0	1	0	0	0
: large intestine	0	0	0	0	0	1	0	0
: liver	0	0	0	1	0	0	0	0
: pituitary gland	5	2	3	2	4	3	2	0
: uterus	0	0	0	0	1	1	1	3
: mammary gland	0	0	0	0	0	0	1	0
: prep./cli. gland	1	0	0	0	2	1	0	0
: spinal cord	1	0	0	0	0	0	0	0
: Zymbal gland	1	1	0	0	0	0	0	0
: peritoneum	1	0	0	0	0	0	0	0
: retroperitoneum	0	0	0	0	0	1	0	0

TABLE 14 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES IN MALE MOUSE
(TWO-YEAR STUDY)

Week on Study	Control			250 ppm			1000 ppm			4000 ppm		
	Au.Wt.	No.of Surviv. <50>		Au.Wt.	% of cont. <50>	No.of Surviv.	Au.Wt.	% of cont. <50>	No.of Surviv.	Au.Wt.	% of cont. <50>	No.of Surviv.
0	23.5 (50)	50/50		23.5 (50)	100	50/50	23.5 (50)	100	50/50	23.5 (50)	100	50/50
1	25.0 (50)	50/50		24.9 (50)	100	50/50	24.8 (50)	99	50/50	23.8 (50)	95	50/50
2	26.0 (50)	50/50		25.6 (50)	98	50/50	25.7 (50)	99	50/50	25.2 (50)	97	50/50
3	26.7 (50)	50/50		26.3 (49)	99	49/50	26.4 (50)	99	50/50	25.7 (50)	96	50/50
4	27.4 (50)	50/50		27.0 (49)	99	49/50	27.1 (50)	99	50/50	26.3 (50)	96	50/50
5	28.3 (50)	50/50		27.9 (49)	99	49/50	28.2 (50)	100	50/50	27.1 (50)	96	50/50
6	29.4 (50)	50/50		28.8 (49)	98	49/50	28.8 (50)	98	50/50	27.7 (50)	94	50/50
7	30.1 (50)	50/50		29.5 (49)	98	49/50	29.7 (50)	99	50/50	28.1 (50)	93	50/50
8	30.5 (50)	50/50		30.1 (49)	99	49/50	30.2 (50)	99	50/50	28.4 (50)	93	50/50
9	31.5 (50)	50/50		31.1 (49)	99	49/50	31.2 (50)	99	50/50	29.2 (50)	93	50/50
10	32.7 (50)	50/50		32.1 (49)	98	49/50	32.2 (50)	98	50/50	30.0 (50)	92	50/50
11	33.6 (50)	50/50		32.9 (49)	98	49/50	32.9 (50)	98	50/50	30.7 (50)	91	50/50
12	34.3 (50)	50/50		33.7 (49)	98	49/50	33.5 (50)	98	50/50	31.2 (50)	91	50/50
13	35.0 (50)	50/50		34.4 (49)	98	49/50	34.3 (50)	98	50/50	29.6 (50)	85	50/50
14	36.0 (50)	50/50		35.1 (49)	98	49/50	34.7 (50)	96	50/50	32.0 (50)	89	50/50
16	37.3 (50)	50/50		36.5 (49)	98	49/50	36.2 (50)	97	50/50	33.2 (50)	89	50/50
18	38.7 (50)	50/50		37.9 (49)	98	49/50	37.2 (50)	96	50/50	34.3 (50)	89	50/50
20	40.1 (50)	50/50		39.1 (49)	98	49/50	38.1 (50)	95	50/50	35.1 (50)	88	50/50
22	40.8 (50)	50/50		39.5 (49)	97	49/50	38.5 (50)	94	50/50	35.7 (50)	88	50/50
24	42.5 (50)	50/50		41.1 (49)	97	49/50	39.8 (50)	94	50/50	36.8 (50)	87	50/50
26	43.7 (50)	50/50		42.3 (49)	97	49/50	40.7 (50)	93	50/50	37.7 (50)	86	50/50
28	44.8 (50)	50/50		43.1 (49)	96	49/50	41.4 (50)	92	50/50	38.3 (50)	85	50/50
30	45.6 (50)	50/50		44.2 (49)	97	49/50	41.8 (50)	92	50/50	38.8 (50)	85	50/50
32	46.7 (50)	50/50		45.3 (49)	97	49/50	42.8 (50)	92	50/50	39.6 (50)	85	50/50
34	47.2 (50)	50/50		45.7 (49)	97	49/50	43.1 (50)	91	50/50	39.9 (50)	85	50/50
36	47.6 (50)	50/50		46.2 (49)	97	49/50	43.6 (50)	92	50/50	40.3 (50)	85	50/50
38	48.5 (50)	50/50		47.1 (49)	97	49/50	44.3 (50)	91	50/50	41.0 (50)	85	50/50
40	48.7 (50)	50/50		47.5 (49)	98	49/50	44.8 (50)	92	50/50	41.0 (49)	84	49/50
42	49.1 (50)	50/50		48.1 (48)	98	48/50	45.5 (50)	93	50/50	41.5 (49)	85	49/50
44	50.1 (50)	50/50		48.9 (48)	98	48/50	46.2 (50)	92	50/50	42.9 (48)	86	48/50
46	50.2 (50)	50/50		49.4 (48)	98	48/50	46.7 (50)	93	50/50	43.2 (48)	86	48/50
48	49.9 (50)	50/50		49.3 (48)	99	48/50	46.5 (50)	93	50/50	43.0 (48)	86	48/50
50	49.9 (50)	50/50		49.1 (48)	98	48/50	46.3 (50)	93	50/50	42.8 (48)	86	48/50
52	50.5 (49)	49/50		49.3 (48)	98	48/50	46.7 (50)	92	50/50	43.0 (48)	85	48/50
54	50.8 (49)	49/50		49.7 (48)	98	48/50	47.2 (50)	93	50/50	43.4 (48)	85	48/50
56	50.9 (49)	49/50		49.6 (48)	97	48/50	47.2 (50)	93	50/50	43.5 (48)	85	48/50
58	51.6 (49)	49/50		51.1 (48)	99	48/50	48.1 (50)	93	50/50	44.5 (48)	86	48/50
60	52.2 (49)	49/50		50.8 (48)	97	48/50	48.1 (50)	92	50/50	44.0 (48)	84	48/50
62	52.3 (49)	49/50		50.9 (48)	97	48/50	48.5 (50)	93	50/50	44.4 (48)	85	48/50
64	52.2 (49)	49/50		50.5 (48)	97	48/50	48.7 (50)	93	50/50	44.5 (48)	85	48/50
66	52.4 (49)	49/50		50.8 (47)	97	47/50	48.6 (50)	93	50/50	44.2 (47)	84	47/50
68	52.7 (49)	49/50		51.2 (47)	97	47/50	49.1 (50)	93	50/50	44.4 (47)	84	47/50
70	52.2 (49)	49/50		50.7 (47)	97	47/50	48.7 (50)	93	50/50	44.1 (47)	84	47/50
72	52.8 (49)	49/50		50.8 (47)	96	47/50	49.1 (50)	93	50/50	44.2 (47)	84	47/50
74	53.5 (49)	49/50		51.4 (46)	96	46/50	49.6 (50)	93	50/50	44.5 (47)	83	47/50
76	53.5 (49)	49/50		51.6 (46)	96	46/50	49.7 (50)	93	49/50	44.6 (47)	83	47/50
78	53.1 (49)	49/50		51.1 (45)	96	45/50	49.2 (49)	93	49/50	44.0 (46)	83	46/50
80	52.6 (49)	49/50		51.2 (44)	97	44/50	49.4 (49)	94	49/50	44.2 (46)	84	46/50
82	53.6 (49)	49/50		51.9 (44)	97	44/50	50.2 (49)	94	49/50	44.5 (46)	83	45/50
84	52.2 (49)	48/50		51.6 (44)	99	44/50	50.0 (48)	96	48/50	44.2 (45)	85	45/50
86	53.4 (47)	47/50		51.3 (43)	96	43/50	49.6 (48)	93	48/50	44.2 (45)	83	45/50
88	53.6 (47)	47/50		51.0 (43)	95	43/50	49.8 (48)	93	48/50	44.6 (45)	83	45/50
90	53.1 (45)	45/50		50.5 (43)	95	43/50	49.1 (48)	92	48/50	44.0 (44)	83	44/50
92	52.9 (45)	45/50		51.1 (40)	97	40/50	48.3 (48)	91	48/50	43.6 (44)	82	44/50
94	52.1 (44)	44/50		50.1 (40)	96	40/50	47.6 (48)	91	48/50	42.8 (44)	82	44/50
96	51.3 (44)	44/50		50.0 (38)	97	38/50	47.1 (46)	92	46/50	42.3 (44)	82	44/50
98	49.9 (42)	41/50		49.0 (36)	98	36/50	46.2 (43)	93	43/50	41.8 (43)	84	43/50
100	50.6 (41)	41/50		49.1 (34)	97	34/50	46.7 (41)	92	40/50	41.4 (42)	82	42/50
102	49.3 (39)	39/50		47.7 (34)	97	34/50	45.9 (39)	93	39/50	40.7 (42)	83	42/50
104	48.5 (38)	38/50		47.3 (33)	98	33/50	45.9 (38)	95	38/50	40.5 (41)	84	40/50

< >:No.of effective animals,():No.of measured animals

Au.Wt.: g

TABLE 15 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES IN FEMALE MOUSE
(TWO-YEAR STUDY)

Week on Study	Control		1000 ppm		No.of Surviv.	4000 ppm		No.of Surviv.	16000 ppm		No.of Surviv.
	Au.Wt.	No.of Surviv. <50>	Au.Wt.	% of cont. <49>		Au.Wt.	% of cont. <50>		Au.Wt.	% of cont. <50>	
0	18.3 (50)	50/50	18.3 (49)	100	50/50	18.3 (50)	100	50/50	18.3 (50)	100	50/50
1	19.7 (50)	50/50	19.7 (49)	100	50/50	19.2 (50)	97	50/50	17.7 (50)	90	50/50
2	20.3 (50)	50/50	20.7 (49)	102	50/50	20.3 (50)	100	50/50	18.7 (50)	92	50/50
3	20.6 (50)	50/50	20.9 (49)	101	50/50	20.5 (50)	100	50/50	19.0 (50)	92	50/50
4	21.3 (50)	50/50	21.4 (49)	100	50/50	21.1 (50)	99	50/50	19.4 (50)	91	50/50
5	21.7 (50)	50/50	22.0 (49)	101	50/50	21.5 (50)	99	50/50	19.9 (50)	92	50/50
6	22.5 (50)	50/50	22.7 (49)	101	50/50	22.0 (50)	98	50/50	20.4 (50)	91	50/50
7	23.3 (50)	50/50	23.1 (49)	99	50/50	22.2 (50)	95	50/50	21.0 (50)	90	50/50
8	23.1 (50)	50/50	23.3 (49)	101	50/50	22.5 (50)	97	50/50	21.2 (50)	92	50/50
9	23.5 (50)	50/50	23.8 (49)	101	50/50	23.0 (50)	98	50/50	21.4 (50)	91	50/50
10	24.2 (50)	50/50	24.2 (49)	100	50/50	23.4 (50)	97	50/50	21.9 (50)	90	50/50
11	24.2 (50)	50/50	24.1 (49)	100	50/50	23.3 (50)	96	50/50	22.2 (50)	92	50/50
12	24.9 (50)	50/50	24.5 (49)	98	50/50	23.6 (50)	95	50/50	22.5 (50)	90	50/50
13	24.8 (50)	50/50	24.9 (49)	100	50/50	23.9 (50)	96	50/50	23.3 (50)	94	50/50
14	25.6 (50)	50/50	25.2 (49)	98	50/50	24.1 (50)	94	50/50	23.2 (50)	91	50/50
16	25.8 (50)	50/50	25.6 (49)	99	50/50	24.9 (50)	97	50/50	23.0 (50)	89	50/50
18	26.7 (50)	50/50	26.0 (49)	97	50/50	24.9 (50)	93	50/50	23.0 (50)	86	50/50
20	26.9 (50)	50/50	26.8 (49)	100	50/50	25.6 (50)	95	50/50	23.7 (50)	88	50/50
22	28.4 (50)	50/50	28.0 (49)	99	50/50	26.4 (50)	93	50/50	24.2 (50)	85	50/50
24	28.8 (50)	50/50	28.2 (49)	98	50/50	26.6 (50)	92	50/50	24.5 (50)	85	50/50
26	29.2 (50)	50/50	28.5 (49)	98	49/50	27.0 (50)	92	50/50	24.9 (50)	85	50/50
28	29.7 (50)	50/50	29.1 (48)	98	49/50	27.2 (50)	92	50/50	25.0 (50)	84	50/50
30	30.0 (50)	50/50	29.5 (48)	98	49/50	27.6 (50)	92	50/50	25.0 (50)	83	50/50
32	30.9 (50)	50/50	30.6 (48)	99	49/50	28.1 (50)	91	50/50	25.5 (50)	83	50/50
34	31.8 (50)	50/50	30.5 (48)	96	49/50	28.6 (50)	90	50/50	25.5 (50)	80	50/50
36	32.2 (50)	50/50	30.6 (48)	95	49/50	28.3 (50)	88	50/50	25.7 (50)	80	50/50
38	33.1 (50)	50/50	31.5 (48)	95	49/50	29.6 (49)	89	49/50	26.0 (50)	79	50/50
40	32.8 (50)	50/50	31.5 (48)	96	49/50	29.2 (49)	89	49/50	25.9 (50)	79	50/50
42	33.4 (50)	50/50	31.7 (48)	95	49/50	29.6 (49)	89	49/50	26.5 (50)	79	50/50
44	34.2 (50)	50/50	32.3 (48)	94	49/50	29.7 (49)	87	49/50	26.4 (50)	77	50/50
46	34.0 (50)	50/50	32.4 (48)	95	49/50	30.0 (49)	88	49/50	26.2 (50)	77	50/50
48	33.7 (50)	50/50	32.4 (48)	96	49/50	30.0 (49)	89	49/50	26.3 (50)	78	50/50
50	34.2 (50)	50/50	32.5 (48)	95	49/50	29.8 (49)	87	49/50	26.5 (50)	77	50/50
52	35.0 (50)	50/50	32.6 (48)	93	49/50	30.4 (49)	87	49/50	26.7 (50)	76	50/50
54	35.1 (50)	50/50	33.2 (48)	95	49/50	30.5 (49)	87	49/50	26.7 (50)	76	50/50
56	34.9 (50)	50/50	32.6 (48)	93	49/50	30.3 (49)	87	49/50	26.7 (50)	77	50/50
58	35.5 (50)	50/50	33.4 (48)	94	49/50	30.9 (49)	87	49/50	26.8 (50)	75	50/50
60	35.6 (50)	50/50	32.8 (48)	92	49/50	30.4 (49)	85	49/50	26.9 (50)	76	50/50
62	36.4 (50)	50/50	33.5 (48)	92	49/50	30.7 (49)	84	49/50	26.9 (50)	74	50/50
64	36.9 (50)	50/50	33.1 (48)	90	49/50	31.1 (49)	84	49/50	26.8 (50)	73	50/50
66	37.2 (49)	49/50	33.5 (47)	90	48/50	30.5 (49)	82	49/50	26.8 (50)	72	50/50
68	37.2 (48)	48/50	33.6 (47)	90	48/50	31.4 (49)	84	49/50	27.3 (50)	73	50/50
70	36.2 (47)	47/50	33.0 (47)	91	48/50	30.8 (49)	85	49/50	26.5 (50)	73	50/50
72	36.9 (47)	47/50	33.2 (47)	90	48/50	31.2 (48)	85	48/50	26.7 (50)	72	50/50
74	37.0 (46)	46/50	33.5 (47)	91	48/50	31.1 (48)	84	48/50	26.8 (50)	72	50/50
76	36.9 (46)	46/50	33.0 (47)	89	48/50	31.2 (47)	85	47/50	27.0 (50)	73	50/50
78	36.5 (46)	46/50	33.2 (46)	91	47/50	31.1 (46)	85	46/50	26.3 (48)	72	48/50
80	37.2 (45)	45/50	33.1 (46)	89	46/49	31.2 (46)	84	46/50	26.5 (48)	71	48/50
82	38.3 (45)	45/50	34.5 (45)	90	45/49	32.5 (45)	85	44/50	27.4 (48)	72	48/50
84	38.1 (44)	44/50	33.8 (44)	89	43/49	31.5 (43)	83	43/50	26.8 (46)	70	46/50
86	37.8 (41)	40/50	33.9 (43)	90	43/49	32.0 (42)	85	42/50	26.6 (46)	70	45/50
88	38.1 (39)	39/50	34.4 (41)	90	41/49	32.4 (42)	85	42/50	27.1 (44)	71	44/50
90	37.6 (39)	39/50	34.3 (41)	91	41/49	31.9 (42)	85	42/50	26.8 (44)	71	44/50
92	38.0 (37)	37/50	34.7 (40)	91	40/49	32.4 (38)	85	38/50	27.4 (43)	72	43/50
94	37.3 (36)	36/50	33.5 (40)	90	39/49	31.6 (37)	85	36/50	27.2 (42)	73	42/50
96	37.8 (34)	34/50	33.6 (38)	89	38/49	32.6 (36)	86	36/50	27.0 (41)	71	41/50
98	37.7 (31)	31/50	32.7 (37)	87	37/49	32.1 (35)	85	35/50	27.0 (41)	72	41/50
100	37.5 (31)	30/50	33.3 (36)	89	36/49	31.6 (35)	84	35/50	26.9 (40)	72	40/50
102	36.8 (28)	28/50	32.6 (34)	89	34/49	32.5 (32)	88	32/50	26.4 (39)	72	39/50
104	36.1 (27)	27/50	32.5 (33)	90	33/49	31.6 (30)	88	30/50	26.4 (39)	73	39/50

< >:No.of effective animals,():No.of measured animals

Au.Wt.: g

TABLE 16 INCIDENCE AND TIME OF MASS OCCURRENCE IN CLINICAL OBSERVATION :MOUSE :MALE

Time of mass occurrence (week)	0~13	14~26	27~39	40~52	53~65	66~78	79~91	92~104	0~104
The kind of mass									
External mass									
Control	0/50	0/50	0/50	2/50	2/49	2/49	2/49	6/45	6/50 (2/12)
250 ppm	0/50	0/49	0/49	3/49	1/48	1/47	5/44	4/40	9/50 (3/17)
1000 ppm	0/50	0/50	0/50	0/50	0/50	1/50	2/49	1/48	2/50 (0/12)
4000 ppm	0/50	0/50	0/50	1/49	1/48	1/47	6/46	6/44	7/50 (1/10)
Internal mass									
Control	0/50	0/50	0/50	0/50	0/49	1/49	2/49	6/45	6/50 (2/12)
250 ppm	1/50	2/49	2/49	2/49	1/48	1/47	4/44	5/40	8/50 (6/17)
1000 ppm	0/50	0/50	0/50	1/50	1/50	2/50	3/49	6/48	10/50 (4/12)
4000 ppm	0/50	1/50	1/50	1/49	1/48	0/47	0/46	4/44	5/50 (1/10)

No. of animals with mass/No. of survival animals at first week on each period.
(No. of dead and moribund animals with mass/No. of dead and moribund animals.)

TABLE 17 INCIDENCE AND TIME OF MASS OCCURRENCE IN CLINICAL OBSERVATION :MOUSE :FEMALE

Time of mass occurrence (week)	0~13	14~26	27~39	40~52	53~65	66~78	79~91	92~104	0~104
The kind of mass									
External mass									
Control	0/50	0/50	0/50	3/50	1/50	1/49	2/46	4/37	10/50 (8/23)
1000 ppm	0/49	0/49	0/49	3/49	1/49	1/47	2/46	4/40	8/49 (2/17)
4000 ppm	0/50	0/50	0/50	0/49	1/49	1/49	1/46	1/38	3/50 (2/20)
16000 ppm	0/50	0/50	0/50	0/50	0/50	1/50	1/48	2/43	2/50 (0/11)
Internal mass									
Control	0/50	0/50	0/50	0/50	0/50	1/49	3/46	5/37	7/50 (5/23)
1000 ppm	0/49	1/49	0/49	2/49	2/49	2/47	6/46	7/40	13/49 (8/17)
4000 ppm	0/50	0/50	0/50	0/49	1/49	2/49	9/46	6/38	12/50 (8/20)
16000 ppm	0/50	0/50	0/50	0/50	2/50	3/50	2/48	4/43	7/50 (4/11)

No. of animals with mass/No. of survival animals at first week on each period.
(No. of dead and moribund animals with mass/No. of dead and moribund animals.)

TABLE 18 WATER CONSUMPTION IN MALE MOUSE(TWO- YEAR STUDY)

Week-Day on Study	Control		250 ppm			1000 ppm			4000 ppm		
	Au.WC.	No.of Surviv. <50>	Au.WC.	% of cont. <50>	No.of Surviv.	Au.WC.	% of cont. <50>	No.of Surviv.	Au.WC.	% of cont. <50>	No.of Surviv.
1-3	4.0 (50)	50/50	3.8 (50)	95	50/50	3.9 (50)	98	50/50	3.4 (50)	85	50/50
1-7	4.2 (50)	50/50	3.9 (50)	93	50/50	4.0 (50)	95	50/50	2.8 (50)	67	50/50
2-3	4.3 (50)	50/50	4.1 (50)	95	50/50	4.3 (50)	100	50/50	3.2 (50)	74	50/50
2-7	4.2 (50)	50/50	4.0 (50)	95	50/50	4.2 (50)	100	50/50	3.2 (50)	76	50/50
3-3	4.0 (50)	50/50	4.0 (50)	100	49/50	3.9 (50)	98	50/50	3.0 (50)	75	50/50
3-7	4.2 (50)	50/50	4.0 (49)	95	49/50	4.0 (50)	95	50/50	3.1 (50)	74	50/50
4-3	4.2 (50)	50/50	4.2 (49)	100	49/50	4.1 (50)	98	50/50	3.2 (50)	76	50/50
4-7	4.2 (50)	50/50	4.0 (47)	95	49/50	4.0 (50)	95	50/50	3.3 (50)	79	50/50
5-3	4.0 (50)	50/50	4.0 (49)	100	49/50	3.7 (50)	93	50/50	3.4 (50)	85	50/50
5-7	4.1 (50)	50/50	4.3 (49)	105	49/50	4.0 (50)	98	50/50	3.3 (50)	80	50/50
6-3	4.0 (50)	50/50	3.8 (49)	95	49/50	3.5 (50)	88	50/50	3.2 (50)	80	50/50
6-7	4.1 (50)	50/50	4.3 (49)	105	49/50	3.9 (50)	95	50/50	3.5 (50)	85	50/50
7-7	4.1 (50)	50/50	4.1 (48)	100	49/50	3.9 (50)	95	50/50	3.4 (50)	83	50/50
8-3	4.0 (50)	50/50	4.0 (49)	100	49/50	3.7 (50)	93	50/50	3.1 (50)	78	50/50
8-7	4.0 (50)	50/50	4.2 (49)	105	49/50	3.8 (50)	95	50/50	3.3 (50)	83	50/50
9-3	4.1 (50)	50/50	4.1 (49)	100	49/50	3.7 (50)	90	50/50	3.4 (50)	83	50/50
9-7	4.0 (50)	50/50	4.0 (48)	100	49/50	3.7 (50)	93	50/50	3.5 (49)	88	50/50
10-3	4.1 (50)	50/50	4.2 (49)	102	49/50	3.8 (50)	93	50/50	3.6 (50)	88	50/50
10-7	4.0 (50)	50/50	3.9 (49)	98	49/50	3.6 (50)	90	50/50	3.4 (49)	85	50/50
11-3	4.1 (50)	50/50	4.1 (49)	100	49/50	3.7 (50)	90	50/50	3.5 (50)	85	50/50
11-7	3.9 (50)	50/50	3.9 (49)	100	49/50	3.6 (50)	92	50/50	3.4 (50)	87	50/50
12-3	3.9 (50)	50/50	3.9 (49)	100	49/50	3.7 (50)	95	50/50	3.1 (50)	79	50/50
12-7	3.8 (50)	50/50	3.8 (48)	100	49/50	3.6 (50)	95	50/50	3.2 (50)	84	50/50
13-3	3.9 (50)	50/50	4.0 (49)	103	49/50	3.6 (50)	92	50/50	3.4 (50)	87	50/50
13-7	3.6 (50)	50/50	3.5 (48)	97	49/50	3.3 (50)	92	50/50	1.7 (50)	47	50/50
14-3	3.7 (50)	50/50	3.8 (49)	103	49/50	3.4 (50)	92	50/50	3.3 (50)	89	50/50
14-7	3.6 (50)	50/50	3.7 (49)	103	49/50	3.4 (50)	94	50/50	3.0 (50)	83	50/50
16-7	3.6 (50)	50/50	3.6 (49)	100	49/50	3.4 (50)	94	50/50	2.8 (50)	78	50/50
18-7	3.5 (50)	50/50	3.6 (49)	103	49/50	3.3 (50)	94	50/50	2.7 (50)	77	50/50
20-7	3.5 (48)	50/50	3.5 (49)	100	49/50	3.2 (50)	91	50/50	2.7 (50)	77	50/50
22-7	3.4 (50)	50/50	3.5 (49)	103	49/50	3.3 (50)	97	50/50	2.7 (50)	79	50/50
24-7	3.5 (50)	50/50	3.4 (48)	97	49/50	3.2 (50)	91	50/50	2.6 (50)	74	50/50
26-7	3.5 (50)	50/50	3.4 (48)	97	49/50	3.2 (50)	91	50/50	2.7 (50)	77	50/50
28-7	3.7 (50)	50/50	3.8 (49)	103	49/50	3.4 (50)	92	50/50	2.9 (50)	78	50/50
30-7	3.7 (50)	50/50	3.9 (49)	105	49/50	3.4 (50)	92	50/50	2.8 (50)	76	50/50
32-7	3.8 (50)	50/50	3.6 (48)	95	49/50	3.4 (49)	89	50/50	2.8 (50)	74	50/50
34-7	3.7 (50)	50/50	3.6 (49)	97	49/50	3.3 (50)	89	50/50	2.8 (50)	76	50/50
36-7	3.9 (50)	50/50	3.9 (49)	100	49/50	3.6 (50)	92	50/50	3.0 (50)	77	50/50
38-7	3.8 (50)	50/50	3.8 (48)	100	49/50	3.6 (50)	95	50/50	2.9 (50)	76	50/50
40-7	3.9 (50)	50/50	3.9 (48)	100	49/50	3.5 (50)	90	50/50	2.9 (49)	74	49/50
42-7	3.9 (50)	50/50	4.0 (48)	103	48/50	3.5 (50)	90	50/50	3.0 (49)	77	49/50
44-7	4.0 (50)	50/50	3.9 (47)	98	48/50	3.6 (50)	90	50/50	3.0 (48)	75	48/50
46-7	3.9 (50)	50/50	3.9 (47)	100	48/50	3.6 (50)	92	50/50	3.0 (48)	77	48/50
48-7	4.0 (50)	50/50	3.9 (47)	98	48/50	3.5 (50)	88	50/50	2.9 (48)	73	48/50
50-7	4.0 (50)	50/50	4.0 (46)	100	48/50	3.6 (50)	90	50/50	3.1 (48)	78	48/50
52-7	4.0 (49)	49/50	4.1 (47)	103	48/50	3.6 (50)	90	50/50	3.0 (48)	75	48/50
54-7	4.0 (49)	49/50	4.0 (47)	100	48/50	3.6 (50)	90	50/50	3.3 (48)	83	48/50
56-7	4.3 (49)	49/50	4.2 (47)	98	48/50	3.7 (50)	86	50/50	3.2 (48)	74	48/50
58-7	4.3 (49)	49/50	4.3 (48)	100	48/50	3.6 (50)	84	50/50	3.1 (48)	72	48/50
60-7	4.0 (49)	49/50	4.0 (47)	100	48/50	3.6 (50)	90	50/50	3.1 (48)	78	48/50
62-7	3.8 (49)	49/50	4.1 (48)	108	48/50	3.6 (50)	95	50/50	3.2 (48)	84	48/50
64-7	4.6 (49)	49/50	4.7 (47)	102	48/50	4.0 (50)	87	50/50	3.4 (48)	74	48/50
66-7	4.5 (49)	49/50	4.4 (45)	98	47/50	3.9 (50)	87	50/50	3.3 (47)	73	47/50
68-7	4.6 (49)	49/50	4.6 (46)	100	47/50	3.8 (50)	83	50/50	3.4 (47)	74	47/50
70-7	4.6 (49)	49/50	4.6 (47)	100	47/50	3.8 (50)	83	50/50	3.3 (47)	72	47/50
72-7	4.2 (49)	49/50	4.4 (47)	105	47/50	3.7 (50)	88	50/50	3.2 (47)	76	47/50
74-7	4.3 (49)	49/50	4.5 (46)	105	46/50	3.8 (50)	88	50/50	3.2 (47)	74	47/50
76-7	4.4 (49)	49/50	4.5 (45)	102	46/50	3.8 (50)	86	49/50	3.2 (47)	73	47/50
78-7	4.6 (49)	49/50	4.7 (43)	102	45/50	4.0 (49)	87	49/50	3.5 (46)	76	46/50
80-7	4.9 (49)	49/50	4.8 (44)	98	44/50	4.1 (49)	84	49/50	3.5 (46)	71	46/50
82-7	4.9 (49)	49/50	4.9 (44)	100	44/50	4.0 (49)	82	49/50	3.4 (46)	69	45/50
84-7	4.7 (48)	48/50	4.8 (42)	102	44/50	4.2 (48)	89	48/50	3.4 (45)	72	45/50
86-7	4.9 (47)	47/50	4.8 (42)	98	43/50	4.3 (48)	88	48/50	3.5 (45)	71	45/50
88-7	5.0 (46)	47/50	5.0 (41)	100	43/50	4.3 (48)	86	48/50	3.4 (45)	68	45/50
90-7	4.6 (45)	45/50	4.8 (41)	104	43/50	4.0 (48)	87	48/50	3.3 (44)	72	44/50
92-7	4.9 (45)	45/50	4.9 (38)	100	40/50	4.1 (48)	84	48/50	3.4 (44)	69	44/50
94-7	4.9 (44)	44/50	4.7 (37)	96	40/50	3.9 (48)	80	48/50	3.3 (44)	67	44/50
96-7	5.0 (42)	44/50	4.9 (35)	98	38/50	4.1 (46)	82	46/50	3.4 (44)	68	44/50
98-7	4.9 (42)	41/50	5.0 (36)	102	36/50	3.8 (45)	78	43/50	3.4 (44)	69	43/50
100-7	4.8 (39)	41/50	4.8 (35)	100	34/50	4.1 (41)	85	40/50	3.3 (42)	69	42/50
102-7	5.1 (37)	39/50	4.8 (34)	94	34/50	4.1 (39)	80	39/50	3.5 (42)	69	42/50
104-7	5.1 (36)	38/50	5.2 (32)	102	33/50	4.2 (38)	82	38/50	3.6 (41)	71	40/50

< >:No.of effective animals,():No.of measured animals

Au.WC.: g

TABLE 19 WATER CONSUMPTION IN FEMALE MOUSE(TWO-YEAR STUDY)

Week-Day on Study	Control			1000 ppm			4000 ppm			16000 ppm		
	Au.WC.	No.of Surviv. <50>		Au.WC.	% of cont. <50>	No.of Surviv.	Au.WC.	% of cont. <50>	No.of Surviv.	Au.WC.	% of cont. <50>	No.of Surviv.
1-3	3.7 (50)	50/50		3.7 (50)	100	50/50	3.1 (50)	84	50/50	1.4 (50)	38	50/50
1-7	4.1 (50)	50/50		3.9 (50)	95	50/50	2.8 (50)	68	50/50	1.9 (50)	46	50/50
2-3	3.9 (50)	50/50		3.8 (50)	97	50/50	3.1 (50)	79	50/50	2.1 (50)	54	50/50
2-7	3.9 (50)	50/50		3.7 (50)	95	50/50	2.9 (50)	74	50/50	2.0 (50)	51	50/50
3-3	3.6 (50)	50/50		3.5 (50)	97	50/50	2.9 (50)	81	50/50	1.8 (50)	50	50/50
3-7	3.8 (50)	50/50		3.9 (50)	103	50/50	3.1 (50)	82	50/50	2.0 (50)	53	50/50
4-3	3.9 (50)	50/50		4.1 (50)	105	50/50	3.2 (50)	82	50/50	2.1 (50)	54	50/50
4-7	4.2 (50)	50/50		4.1 (47)	98	50/50	3.3 (50)	79	50/50	2.1 (50)	50	50/50
5-3	4.0 (50)	50/50		4.2 (49)	105	50/50	3.2 (50)	80	50/50	2.3 (50)	58	50/50
5-7	4.2 (50)	50/50		4.2 (48)	100	50/50	3.2 (50)	76	50/50	2.3 (50)	55	50/50
6-3	4.1 (50)	50/50		4.3 (50)	105	50/50	3.3 (50)	80	50/50	2.4 (50)	59	50/50
6-7	4.3 (50)	50/50		4.4 (47)	102	50/50	3.3 (50)	77	50/50	2.5 (50)	58	50/50
7-7	4.4 (50)	50/50		4.4 (47)	100	50/50	3.3 (50)	75	50/50	2.2 (50)	50	50/50
8-3	4.0 (50)	50/50		4.1 (49)	103	50/50	3.4 (50)	85	50/50	2.3 (50)	58	50/50
8-7	4.3 (50)	50/50		4.3 (49)	100	50/50	3.4 (50)	79	50/50	2.3 (50)	53	50/50
9-3	4.1 (50)	50/50		4.3 (50)	105	50/50	3.3 (50)	80	50/50	2.3 (50)	56	50/50
9-7	4.1 (50)	50/50		4.3 (49)	105	50/50	3.6 (49)	88	50/50	2.4 (50)	59	50/50
10-3	4.1 (50)	50/50		4.4 (50)	107	50/50	3.6 (50)	88	50/50	2.4 (50)	59	50/50
10-7	4.0 (50)	50/50		4.3 (49)	108	50/50	3.5 (49)	88	50/50	2.4 (50)	60	50/50
11-3	4.0 (50)	50/50		4.2 (50)	105	50/50	3.4 (50)	85	50/50	2.2 (50)	55	50/50
11-7	4.1 (50)	50/50		4.0 (50)	98	50/50	3.5 (50)	85	50/50	2.4 (50)	59	50/50
12-3	4.0 (50)	50/50		4.1 (50)	103	50/50	3.5 (50)	88	50/50	2.3 (50)	58	50/50
12-7	4.1 (50)	50/50		4.1 (49)	100	50/50	3.5 (49)	85	50/50	2.4 (50)	59	50/50
13-3	4.0 (50)	50/50		4.1 (50)	103	50/50	3.4 (50)	85	50/50	2.4 (50)	60	50/50
13-7	3.9 (50)	50/50		4.1 (50)	105	50/50	3.5 (50)	90	50/50	3.9 (50)	100	50/50
14-3	4.1 (50)	50/50		4.0 (50)	98	50/50	3.5 (50)	85	50/50	2.2 (50)	54	50/50
14-7	4.1 (50)	50/50		4.0 (50)	98	50/50	3.4 (50)	83	50/50	2.6 (50)	63	50/50
16-7	4.1 (50)	50/50		4.0 (49)	98	50/50	3.4 (49)	83	50/50	2.5 (50)	61	50/50
18-7	4.1 (50)	50/50		3.9 (49)	95	50/50	3.2 (50)	78	50/50	2.5 (50)	61	50/50
20-7	4.1 (50)	50/50		3.8 (48)	93	50/50	3.2 (50)	78	50/50	2.5 (50)	61	50/50
22-7	4.1 (50)	50/50		3.7 (49)	90	50/50	3.2 (49)	78	50/50	2.5 (50)	61	50/50
24-7	4.0 (49)	50/50		3.6 (49)	90	50/50	3.0 (50)	75	50/50	2.3 (50)	58	50/50
26-7	3.8 (48)	50/50		3.4 (49)	89	49/50	3.0 (49)	79	50/50	2.3 (50)	61	50/50
28-7	4.1 (50)	50/50		3.7 (47)	90	49/50	3.2 (50)	78	50/50	2.6 (50)	63	50/50
30-7	4.2 (49)	50/50		4.2 (47)	100	49/50	3.8 (49)	90	50/50	3.1 (50)	74	50/50
32-7	3.9 (49)	50/50		3.5 (46)	90	49/50	3.1 (49)	79	50/50	2.4 (50)	62	50/50
34-7	3.8 (48)	50/50		3.6 (48)	95	49/50	3.2 (50)	84	50/50	2.4 (50)	63	50/50
36-7	4.0 (50)	50/50		3.9 (48)	98	49/50	3.2 (49)	80	50/50	2.5 (50)	63	50/50
38-7	3.9 (49)	50/50		3.7 (48)	95	49/50	3.2 (48)	82	49/50	2.5 (50)	64	50/50
40-7	4.0 (50)	50/50		3.7 (47)	93	49/50	3.2 (48)	80	49/50	2.6 (50)	65	50/50
42-7	4.1 (50)	50/50		3.7 (48)	90	49/50	3.3 (49)	80	49/50	2.5 (50)	61	50/50
44-7	4.1 (50)	50/50		3.5 (47)	85	49/50	3.2 (49)	78	49/50	2.5 (50)	61	50/50
46-7	3.9 (49)	50/50		3.6 (48)	92	49/50	3.2 (49)	82	49/50	2.3 (50)	59	50/50
48-7	4.0 (50)	50/50		3.5 (47)	88	49/50	3.1 (49)	78	49/50	2.4 (50)	60	50/50
50-7	4.0 (50)	50/50		3.6 (48)	90	49/50	3.2 (48)	80	49/50	2.6 (50)	65	50/50
52-7	4.1 (50)	50/50		3.5 (47)	85	49/50	3.2 (49)	78	49/50	2.6 (50)	63	50/50
54-7	4.0 (49)	50/50		3.4 (48)	85	49/50	3.1 (49)	78	49/50	2.5 (50)	63	50/50
56-7	4.1 (50)	50/50		3.7 (48)	90	49/50	3.2 (48)	78	49/50	2.5 (50)	61	50/50
58-7	4.2 (50)	50/50		3.7 (48)	88	49/50	3.2 (49)	76	49/50	2.4 (50)	57	50/50
60-7	3.9 (50)	50/50		3.5 (48)	90	49/50	3.0 (49)	77	49/50	2.4 (50)	62	50/50
62-7	4.0 (50)	50/50		3.7 (47)	93	49/50	3.0 (49)	75	49/50	2.5 (50)	63	50/50
64-7	3.9 (50)	50/50		3.4 (48)	87	49/50	3.2 (48)	82	49/50	2.5 (50)	64	50/50
66-7	4.3 (49)	49/50		3.8 (46)	88	48/50	3.1 (49)	72	49/50	2.5 (50)	58	50/50
68-7	4.0 (48)	48/50		3.6 (46)	90	48/50	3.2 (49)	80	49/50	2.5 (50)	63	50/50
70-7	4.1 (48)	47/50		3.8 (46)	93	48/50	3.2 (49)	78	49/50	2.5 (50)	61	50/50
72-7	4.1 (47)	47/50		3.6 (47)	88	48/50	3.1 (48)	76	48/50	2.4 (50)	59	50/50
74-7	4.1 (46)	46/50		3.6 (46)	88	48/50	3.2 (48)	78	48/50	2.4 (50)	59	50/50
76-7	3.9 (46)	46/50		3.6 (47)	92	48/50	3.0 (47)	77	47/50	2.4 (50)	62	50/50
78-7	4.1 (46)	46/50		3.7 (46)	90	47/50	3.3 (46)	80	46/50	2.5 (48)	61	48/50
80-7	4.2 (45)	45/50		3.9 (46)	93	46/49	3.3 (46)	79	46/50	2.5 (48)	60	48/50
82-7	4.2 (45)	45/50		3.8 (45)	90	45/49	3.3 (45)	79	44/50	2.5 (48)	60	48/50
84-7	4.1 (44)	44/50		3.9 (44)	95	43/49	3.3 (43)	80	43/50	2.4 (47)	59	46/50
86-7	4.4 (41)	40/50		3.7 (43)	84	43/49	3.5 (42)	80	42/50	2.5 (46)	57	45/50
88-7	4.3 (39)	39/50		3.8 (41)	88	41/49	3.4 (42)	79	42/50	2.5 (44)	58	44/50
90-7	4.1 (39)	39/50		3.6 (41)	88	41/49	3.3 (42)	80	42/50	2.4 (44)	59	44/50
92-7	4.4 (37)	37/50		3.9 (40)	89	40/49	3.3 (39)	75	38/50	2.5 (42)	57	43/50
94-7	4.1 (36)	36/50		3.6 (40)	88	39/49	3.3 (37)	80	36/50	2.4 (42)	59	42/50
96-7	4.2 (32)	34/50		3.6 (38)	86	38/49	3.2 (36)	76	36/50	2.4 (40)	57	41/50
98-7	4.2 (31)	31/50		3.5 (37)	83	37/49	3.2 (36)	76	35/50	2.4 (41)	57	41/50
100-7	4.2 (31)	30/50		3.7 (36)	88	36/49	3.3 (35)	79	35/50	2.5 (40)	60	40/50
102-7	4.6 (28)	28/50		3.6 (34)	78	34/49	3.5 (32)	76	32/50	2.5 (39)	54	39/50
104-7	4.6 (27)	27/50		3.6 (32)	78	33/49	3.5 (30)	76	30/50	2.4 (39)	52	39/50

< >:No.of effective animals,():No.of measured animals

Au.WC.:g

TABLE 20 FOOD CONSUMPTION IN MALE MOUSE(TWO-YEAR STUDY)

Week on Study	Control		250 ppm		1000 ppm		4000 ppm		No.of Surviv.
	Au.FC.	No.of Surviv. <50>	Au.FC.	% of cont. <50>	Au.FC.	% of cont. <50>	Au.FC.	% of cont. <50>	
1	3.9 (50)	50/50	4.0 (50)	103	50/50	4.0 (50)	103	50/50	50/50
2	3.8 (50)	50/50	3.7 (50)	97	50/50	3.8 (50)	100	50/50	50/50
3	3.7 (50)	50/50	3.6 (49)	97	49/50	3.6 (50)	97	50/50	50/50
4	3.7 (50)	50/50	3.7 (49)	100	49/50	3.8 (50)	103	50/50	50/50
5	3.7 (50)	50/50	3.7 (49)	100	49/50	3.8 (50)	103	50/50	50/50
6	3.8 (50)	50/50	3.8 (49)	100	49/50	3.8 (50)	100	50/50	50/50
7	3.9 (50)	50/50	3.8 (49)	97	49/50	3.9 (50)	100	50/50	50/50
8	3.8 (50)	50/50	3.9 (49)	103	49/50	3.8 (50)	100	50/50	50/50
9	4.0 (50)	50/50	4.0 (49)	100	49/50	4.0 (50)	100	50/50	50/50
10	4.1 (50)	50/50	4.1 (49)	100	49/50	4.1 (50)	100	50/50	50/50
11	4.0 (50)	50/50	4.0 (49)	100	49/50	3.9 (50)	98	50/50	50/50
12	4.1 (50)	50/50	4.1 (49)	100	49/50	4.0 (50)	98	50/50	50/50
13	4.0 (50)	50/50	4.0 (49)	100	49/50	4.0 (50)	100	50/50	50/50
14	4.1 (50)	50/50	4.1 (49)	100	49/50	4.0 (50)	98	50/50	50/50
18	4.3 (50)	50/50	4.3 (49)	100	49/50	4.1 (50)	95	50/50	50/50
22	4.5 (50)	50/50	4.5 (49)	100	49/50	4.4 (50)	98	50/50	50/50
26	4.4 (50)	50/50	4.4 (49)	100	49/50	4.2 (50)	95	50/50	50/50
30	4.4 (50)	50/50	4.5 (49)	102	49/50	4.3 (50)	98	50/50	50/50
34	4.5 (50)	50/50	4.0 (49)	89	49/50	4.3 (50)	96	50/50	50/50
38	4.5 (50)	50/50	4.5 (49)	100	49/50	4.4 (50)	98	50/50	50/50
42	4.4 (50)	50/50	4.4 (49)	100	48/50	4.3 (50)	98	50/50	49/50
46	4.4 (50)	50/50	4.6 (48)	105	48/50	4.4 (50)	100	50/50	48/50
50	4.8 (50)	50/50	4.9 (48)	102	48/50	4.6 (50)	96	50/50	48/50
54	5.0 (49)	49/50	5.1 (48)	102	48/50	4.9 (50)	98	50/50	48/50
58	4.9 (49)	49/50	5.0 (48)	102	48/50	4.7 (50)	96	50/50	48/50
62	5.2 (49)	49/50	5.2 (48)	100	48/50	4.8 (50)	92	50/50	48/50
66	4.9 (49)	49/50	4.8 (48)	98	47/50	4.7 (50)	96	50/50	47/50
70	5.0 (49)	49/50	4.9 (47)	98	47/50	4.7 (50)	94	50/50	47/50
74	5.0 (49)	49/50	5.0 (46)	100	46/50	4.8 (50)	96	50/50	47/50
78	5.0 (49)	49/50	5.1 (45)	102	45/50	4.9 (49)	98	49/50	46/50
82	5.0 (49)	49/50	5.0 (44)	100	44/50	4.9 (49)	98	49/50	45/50
86	5.2 (47)	47/50	5.1 (24)	98	43/50	5.1 (39)	98	48/50	45/50
88	5.2 (47)	47/50	5.3 (43)	102	43/50	5.1 (48)	98	48/50	45/50
90	4.7 (47)	45/50	5.0 (43)	106	43/50	4.7 (48)	100	48/50	44/50
94	5.0 (44)	44/50	5.1 (40)	102	40/50	4.8 (48)	96	48/50	44/50
98	4.7 (43)	41/50	5.0 (36)	106	36/50	4.6 (45)	98	43/50	43/50
102	5.0 (39)	39/50	4.9 (34)	98	34/50	4.9 (39)	98	39/50	42/50
104	4.8 (38)	38/50	5.0 (33)	104	33/50	4.7 (38)	98	38/50	40/50

< >:No.of effective animals,():No.of measured animals

Au.FC.: g

TABLE 21 FOOD CONSUMPTION IN FEMALE MOUSE(TWO-YEAR STUDY)

Week on Study	Control		1000 ppm			4000 ppm			16000 ppm		
	Au.F.C.	No.of Surviv. <50>	Au.F.C.	% of cont. <49>	No.of Surviv.	Au.F.C.	% of cont. <50>	No.of Surviv.	Au.F.C.	% of cont. <50>	No.of Surviv.
1	3.3 (50)	50/50	3.5 (49)	106	50/50	3.2 (50)	97	50/50	2.7 (50)	82	50/50
2	3.3 (50)	50/50	3.4 (49)	103	50/50	3.4 (50)	103	50/50	3.0 (49)	91	50/50
3	3.2 (50)	50/50	3.2 (49)	100	50/50	3.1 (50)	97	50/50	2.7 (50)	84	50/50
4	3.3 (50)	50/50	3.3 (49)	100	50/50	3.2 (50)	97	50/50	2.8 (50)	85	50/50
5	3.3 (50)	50/50	3.4 (49)	103	50/50	3.3 (50)	100	50/50	2.8 (50)	85	50/50
6	3.4 (50)	50/50	3.4 (49)	100	50/50	3.4 (50)	100	50/50	3.0 (50)	88	50/50
7	3.5 (50)	50/50	3.4 (49)	97	50/50	3.4 (50)	97	50/50	3.3 (49)	94	50/50
8	3.3 (50)	50/50	3.4 (49)	103	50/50	3.3 (50)	100	50/50	3.1 (50)	94	50/50
9	3.5 (50)	50/50	3.5 (49)	100	50/50	3.5 (50)	100	50/50	3.3 (50)	94	50/50
10	3.7 (50)	50/50	3.7 (49)	100	50/50	3.6 (50)	97	50/50	3.4 (50)	92	50/50
11	3.8 (50)	50/50	3.9 (49)	103	50/50	4.0 (50)	105	50/50	3.7 (50)	97	50/50
12	3.9 (50)	50/50	3.7 (49)	95	50/50	3.7 (50)	95	50/50	3.4 (50)	87	50/50
13	3.6 (50)	50/50	3.7 (49)	103	50/50	3.7 (50)	103	50/50	3.7 (50)	103	50/50
14	3.8 (50)	50/50	3.7 (49)	97	50/50	3.7 (50)	97	50/50	3.3 (50)	87	50/50
18	3.9 (50)	50/50	3.8 (49)	97	50/50	3.7 (50)	95	50/50	3.4 (50)	87	50/50
22	4.3 (50)	50/50	4.3 (49)	100	50/50	4.2 (50)	98	50/50	3.8 (50)	88	50/50
26	4.0 (50)	50/50	3.9 (49)	98	49/50	3.7 (50)	93	50/50	3.6 (50)	90	50/50
30	4.1 (50)	50/50	4.0 (48)	98	49/50	3.9 (50)	95	50/50	3.6 (50)	88	50/50
34	4.2 (50)	50/50	4.1 (48)	98	49/50	4.0 (50)	95	50/50	3.6 (50)	86	50/50
38	4.2 (50)	50/50	4.1 (48)	98	49/50	3.9 (48)	93	49/50	3.5 (50)	83	50/50
42	4.3 (50)	50/50	4.1 (48)	95	49/50	3.9 (49)	91	49/50	3.8 (50)	88	50/50
46	4.3 (50)	50/50	4.2 (48)	98	49/50	4.1 (49)	95	49/50	3.7 (50)	86	50/50
50	4.1 (50)	50/50	4.1 (48)	100	49/50	3.9 (49)	95	49/50	3.8 (50)	93	50/50
54	4.5 (50)	50/50	4.6 (48)	102	49/50	4.3 (49)	96	49/50	4.1 (50)	91	50/50
58	4.3 (50)	50/50	4.4 (48)	102	49/50	4.1 (49)	95	49/50	3.7 (50)	86	50/50
62	4.7 (50)	50/50	4.6 (48)	98	49/50	4.3 (49)	91	49/50	3.9 (50)	83	50/50
66	4.5 (49)	49/50	4.2 (48)	93	48/50	3.8 (49)	84	49/50	3.7 (50)	82	50/50
70	4.5 (48)	47/50	4.3 (47)	96	48/50	4.0 (49)	89	49/50	3.8 (50)	84	50/50
74	4.5 (46)	46/50	4.3 (47)	96	48/50	4.0 (48)	89	48/50	3.8 (50)	84	50/50
78	4.5 (46)	46/50	4.4 (47)	98	47/50	4.3 (46)	96	46/50	3.8 (49)	84	48/50
82	4.6 (45)	45/50	4.5 (45)	98	45/49	4.3 (45)	93	44/50	3.9 (48)	85	48/50
86	4.7 (19)	40/50	4.5 (43)	96	43/49	4.5 (34)	96	42/50	3.9 (46)	83	45/50
88	4.8 (40)	39/50	4.6 (42)	96	41/49	4.5 (42)	94	42/50	4.1 (44)	85	44/50

TABLE 22 NEOPLASTIC LESIONS (LIVER) INCIDENCE AND STATISTICAL ANALYSIS : MOUSE : MALE

Group Name	Control	1000 ppm	4000 ppm	16000 ppm
SITE : liver TUMOUR : hepatocellular carcinoma				
Tumor Rates				
Overall Rates(a)	18/50 (36.0)	18/50 (36.0)	8/50 (16.0)	4/50 (8.0)
Adjusted Rates(b)	31.71	44.44	20.00	10.00
Terminal Rates(c)	12/38 (31.6)	14/33 (42.4)	6/38 (15.8)	4/40 (10.0)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=0.9952			
Prevalence Method(d)	P=0.9996			
Combined analysis(d)	P=1.0000			
Cochran-Armitage Test(e)	P=0.0003**			
Fisher Exact Test(e)		P=0.4230	P=0.0617	P=0.0053**
SITE : liver TUMOUR : hepatocellular adenoma, hepatocellular carcinoma				
Tumor Rates				
Overall Rates(a)	23/50 (46.0)	24/50 (48.0)	13/50 (26.0)	7/50 (14.0)
Adjusted Rates(b)	44.74	61.11	32.50	15.00
Terminal Rates(c)	17/38 (44.7)	20/33 (60.6)	11/38 (28.9)	6/40 (15.0)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=0.9293			
Prevalence Method(d)	P=1.0000			
Combined analysis(d)	P=1.0000			
Cochran-Armitage Test(e)	P=0.0001**			
Fisher Exact Test(e)		P=0.4774	P=0.1075	P=0.0078**

TABLE 23 NEOPLASTIC LESIONS (PITUITARY GLAND) INCIDENCE AND STATISTICAL ANALYSIS : MOUSE : FEMALE

Group Name	Control	1000 ppm	4000 ppm	16000 ppm
SITE : pituitary gland TUMOUR : adenoma				
Tumor Rates				
Overall Rates(a)	7/50 (14.0)	4/48 (8.3)	7/50 (14.0)	1/48 (2.1)
Adjusted Rates(b)	22.22	6.06	21.88	2.70
Terminal Rates(c)	6/27 (22.2)	2/33 (6.1)	6/30 (20.0)	1/37 (2.7)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=0.9243			
Prevalence Method(d)	P=0.9746			
Combined analysis(d)	P=0.9917			
Cochran-Armitage Test(e)	P=0.0544			
Fisher Exact Test(e)		P=0.3191	P=0.3882	P=0.0484*
SITE : pituitary gland TUMOUR : adenoma, adenocarcinoma				
Tumor Rates				
Overall Rates(a)	7/50 (14.0)	5/48 (10.4)	8/50 (16.0)	1/48 (2.1)
Adjusted Rates(b)	22.22	9.09	21.88	2.70
Terminal Rates(c)	6/27 (22.2)	3/33 (9.1)	6/30 (20.0)	1/37 (2.7)
Statistical Analysis				
Peto Test				
Standard Method(d)	P=0.9053			
Prevalence Method(d)	P=0.9826			
Combined analysis(d)	P=0.9943			
Cochran-Armitage Test(e)	P=0.0418*			
Fisher Exact Test(e)		P=0.4331	P=0.4854	P=0.0484*

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

(b):Kaplan-Meire estimate tumor incidence at the end of 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.

TABLE 24 NUMBER OF MOUSE WITH SELECTED NASAL CAVITY LESIONS

Group	Male				Female			
	Control	250ppm	1000ppm	4000ppm	Control	1000ppm	4000ppm	16000ppm
Number of examined	50	50	50	50	50	49	50	50
eosinophilic change:								
olfactory epithelium	24	18	29	13	2	7	6	19
eosinophilic change:								
respiratory epithelium	29	16	9	42	31	26	48	46
respiratory metaplasia:gland	30	9	8	7	6	11	4	3

TABLE 25 NUMBER OF MOUSE WITH DESQUAMATION OF PELVIS IN KIDNEY

Group	Male				Female			
	Control	250ppm	1000ppm	4000ppm	Control	1000ppm	4000ppm	16000ppm
Number of examined	50	50	50	50	50	49	50	50
desquamation:pelvis	0	0	0	1	1	13	16	19

TABLE 26 CAUSE OF DEATH :MOUSE

Group	Male				Female			
	Control	250ppm	1000ppm	4000ppm	Control	1000ppm	4000ppm	16000ppm
Number of dead/moribund animal	12	17	12	10	23	16	20	11
No microscopical confirmation	1	2	0	1	1	2	3	1
Renal lesion	1	0	0	0	0	0	0	0
Thrombosis	0	0	0	0	1	0	0	0
Hemorrhage	0	1	0	0	0	0	0	0
Urinary retention	1	0	0	0	0	0	0	0
Arteritis	0	1	0	0	0	1	0	0
Hydronephrosis	0	2	1	0	0	1	1	1
Tumor death : leukemia	1	3	5	1	12	5	8	3
: subcutis	0	0	0	1	1	1	0	0
: lung	2	1	3	1	1	0	0	1
: spleen	0	0	0	0	0	1	0	0
: heart	0	1	0	0	0	0	0	0
: small intestine	0	0	0	1	0	0	0	0
: large intestine	1	0	0	0	0	0	1	0
: liver	5	6	2	4	0	0	2	1
: pituitary gland	0	0	0	0	1	2	1	0
: uterus	0	0	0	0	5	2	4	4
: peripheral nerve	0	0	0	1	0	0	0	0
: bone	0	0	0	0	1	0	0	0
: peritoneum	0	0	1	0	0	1	0	0