アントラセンのラット及びマウスを用いた
経口投与によるがん原性予備試験(混餌試験)報告書

試験番号

2 週 間　：ラット/0193 ; マウス/0194

1 3 週 間 ：ラット/0220 ; マウス/0221

TABLES

TABLES

TABLES(CONTINUED)

TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS IN THE FEEDING STUDIES OF ANTHRACENE

Two-week studies	Thirteen-week Studies
<Method of Administration>	
Feed	Feed
<Number of Groups>	
Male 6, Female 6	Male 6, Female 6
<Size of Groups>	
10 males and 10 females of each groups	10 males and 10 females of each groups
<Animals>	
Strain and Species	
F344/DuCrj(Fischer)rat	F344/DuCrj(Fischer)rat
Crj:BDF1 mouse	Crj:BDF1 mouse
Animal Source	
Charles River Japan, Inc.	Charles River Japan, Inc.
Duration of Time Held Before Study	
2 wk	2 wk
Age When Placed on Study	
6 wk	6 wk
Age When Killed	
8 wk	19 wk
<Doses>	
Rat--0, 80, 400, 2000, 10000, or 500000ppm;	Same as two-week studies
Mouse--0, 80, 400, 2000, 10000, or 500000ppm;	Same as two-week studies
<Duration of Dosing>	
7d/wk for 2wk	7d/wk for 13wk
<Animal Maintenance>	
Feed	
CRF-1 (Oriental Yeast Co.,Ltd.) Sterilized by γ-ray Available ad libitum	Same as two-week studies
Water	
Sterilized by ultraviolet rays Automatic watering system Available ad libitum	Same as two-week studies
Animal per Cage	
Single (stainless steel wire)	Same as two-week studies
Animal Room Environment	
Barrier system Temperature :24±2℃ Humidity :55±10% Fluorescent light 12h/d 15-17 room air changes /h	Same as two-week studies
<Type and Frequency of Observation>	
Clinical sign	
Observed 1/d	Observed 1/d
Body weight	
Weighed 0-0, 1-4, 1-7, 2-4, and 2-7 (wk-d)	Weighed 1/wk for 13wk
Food Consumption	
Weighed 1-7, 2-7 (wk-d)	Weighed 1/wk for 13wk

TABLE 1 (Continued) EXPERIMENTAL DESIGN AND MATERIALS AND METHODS IN THE FEEDING STUDIES OF ANTHRACENE

Two-week Studies	Thirteen-week Studies
<Hematology> Hematology measurement performed on at least five animals per sex per groups. Red blood cell (RBC), Hemoglobin, Hematocrit, Mean corpuscular volume (MCV), Mean corpuscular hemoglobin (MCH), Mean corpuscular hemoglobin concentration (MCHC), Reticulocyte<rat only>, Prothrombin time<rat only>, APTT<rat only>, Platelet, White blood cell (WBC), Differential WBC.	Hematology measurement performed on schedule sacrficed animals. Red blood cell (RBC), Hemoglobin, Hematocrit, Mean corpuscular volume (MCV), Mean corpuscular hemoglobin (MCH), Mean corpuscular hemoglobin concentration (MCHC), Platelet, White blood cell (WBC), Differential WBC, Reticulocyte<rat only>, Prothrombin time<rat only>, APTT<rat only>.
<Biochemistry> Biochemistry measurement performed on at least five animals per sex per groups. Total protein, Albumin, A/G ratio, T-bilirubin, Glucose, T-cholesterol, Triglyceride, Phospholipid <rat only>, Glutamic oxaloacetic transaminase (GOT), Glutamic pyruvic transaminase (GPT), Lactate dehydrogenase(LDH), γ-Glutamil transpeptidase (γ-GTP) <rat only>, Creatine phosphokinase (CPK), Urea nitrogen, Creatinine <rat only>, Calcium, Inorganic phosphorus.	Biochemistry measurement performed on schedule sacrficed animals. Total protein, Albumin, A/G ratio, T-bilirubin, Glucose, T-cholesterol, Triglyceride, Phospholipid <rat only>, Glutamic oxaloacetic transaminase (GOT), Glutamic pyruvic transaminase (GPT), Alkaline phosphatase(ALP), Lactate dehydrogenase(LDH), γ-Glutamil transpeptidase (γ-GTP) <rat only>, Creatine phosphokinase (CPK), Urea nitrogen, Creatinine <rat only>, Sodium, Potassium, Chloride, Calcium, Inorganic phosphorus.
<Urinalysis> None	Urinalysis measurement performed on schedule sacrficed animals. pH, Protein, Glucose, Ketone body, Bilirubin <rat only>, Occult blood, Urobilinogen.
<Necropsy> Necropsy performed on all animals.	Same as two-week studies.
<Organ weight> Organ weight measurement performed on at least five animals per sex per groups. The following organs were weighed: brain, lung, liver, spleen, heart, kidney, adrenal, testis, ovary, thymus.	Organ weight measurement performed on scheduled sacrificed animals. The following organs were weighed: brain, lung, liver, spleen, heart, kidney, adrenal, testis, ovary, thymus.
<Histopathologic Examination> Histopathologic examination performed on at least two animals per sex per groups. The following organs were examined: nasal cavity, trachea, lung, bone marrow, lymph node, thymus, spleen, heart, stomach, small intestine, large intestine, liver, pancreas, kidney, pituitary, thyroid, adrenal, testis, ovary, brain.	Histopathologic examination performed on all animals. The following organs were examined: skin, nasal cavity, trachea, lung, bone marrow, lymph node, thymus, spleen, heart, tongue, salivary gland, esophagus, stomach, small intestine, large intestine, liver, pancreas, kidney, urinary bladder, pituitary, thyroid, adrenal, testis, epididymis, seminal vesicle, prostate, ovary, uterus, mammary gland, brain, spinal cord, peripheral nerve, eye, Harderian gland, muscle, bone.

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

Week-Day on Study	Control Av.Wt.	Control No.of Surviv. <10>	80 ppm Av.Wt.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.Wt.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.Wt.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.Wt.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
0-0	120 (10)	10/10	120 (10)	100	10/10	120 (10)	100	10/10	120 (10)	100	10/10	120 (10)	100	10/10	120 (10)	100	10/10
1-1	123 (10)	10/10	122 (10)	99	10/10	122 (10)	99	10/10	121 (10)	98	10/10	118 (10)	96	10/10	117 (10)	95	10/10
1-3	130 (10)	10/10	130 (10)	100	10/10	129 (10)	99	10/10	129 (10)	99	10/10	126 (10)	97	10/10	123 (10)	95	10/10
1-7	147 (10)	10/10	146 (10)	99	10/10	145 (10)	99	10/10	145 (10)	99	10/10	142 (10)	97	10/10	140 (10)	95	10/10
2-3	159 (10)	10/10	158 (10)	99	10/10	157 (10)	99	10/10	157 (10)	99	10/10	154 (10)	97	10/10	152 (10)	96	10/10
2-7	171 (10)	10/10	169 (10)	99	10/10	168 (10)	98	10/10	167 (10)	98	10/10	165 (10)	96	10/10	161 (10)	94	10/10

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

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

Week-Day on Study	Control Av.Wt.	Control No.of Surviv. <10>	80 ppm Av.Wt.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.Wt.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.Wt.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.Wt.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
0-0	99 (10)	10/10	99 (10)	100	10/10	99 (10)	100	10/10	99 (10)	100	10/10	99 (10)	100	10/10	99 (10)	100	10/10
1-1	101 (10)	10/10	101 (10)	100	10/10	100 (10)	99	10/10	99 (10)	98	10/10	96 (10)	95	10/10	94 (10)	93	10/10
1-3	105 (10)	10/10	106 (10)	101	10/10	105 (10)	100	10/10	103 (10)	98	10/10	101 (10)	96	10/10	97 (10)	92	10/10
1-7	113 (10)	10/10	114 (10)	101	10/10	114 (10)	101	10/10	112 (10)	99	10/10	110 (10)	97	10/10	107 (10)	95	10/10
2-3	120 (10)	10/10	120 (10)	100	10/10	121 (10)	101	10/10	117 (10)	98	10/10	116 (10)	97	10/10	113 (10)	94	10/10
2-7	124 (10)	10/10	125 (10)	101	10/10	127 (10)	102	10/10	121 (10)	98	10/10	121 (10)	98	10/10	117 (10)	94	10/10

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

TABLE 4 FOOD CONSUMPTION IN MALE RAT (TWO-WEEK STUDY)

Week-Day on Study	Control Av.FC.	Control No.of Surviv. <10>	80 ppm Av.FC.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.FC.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.FC.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.FC.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
1-3	12.3 (10)	10/10	12.5 (10)	102	10/10	12.0 (10)	98	10/10	11.4 (10)	93	10/10	10.3 (10)	84	10/10	9.4 (10)	76	10/10
1-7	13.4 (10)	10/10	13.4 (10)	100	10/10	13.1 (10)	98	10/10	12.8 (10)	96	10/10	12.8 (10)	96	10/10	12.8 (10)	96	10/10
2-3	12.8 (10)	10/10	12.9 (10)	101	10/10	12.8 (10)	100	10/10	12.8 (10)	100	10/10	12.7 (10)	99	10/10	13.1 (10)	102	10/10
2-7	13.4 (10)	10/10	13.1 (10)	98	10/10	13.2 (10)	99	10/10	13.2 (10)	99	10/10	13.0 (10)	97	10/10	13.4 (10)	100	10/10

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

TABLE 5 FOOD CONSUMPTION IN FEMALE RAT (TWO-WEEK STUDY)

Week-Day on Study	Control Av.FC.	Control No.of Surviv. <10>	80 ppm Av.FC.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.FC.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.FC.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.FC.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
1-3	10.1 (10)	10/10	10.5 (10)	104	10/10	10.2 (10)	101	10/10	9.0 (10)	89	10/10	8.0 (10)	79	10/10	6.5 (10)	64	10/10
1-7	11.1 (10)	10/10	11.3 (10)	102	10/10	10.9 (10)	98	10/10	10.3 (10)	93	10/10	10.1 (10)	91	10/10	9.9 (10)	89	10/10
2-3	10.5 (10)	10/10	10.9 (9)	104	10/10	11.0 (10)	105	10/10	10.2 (10)	97	10/10	10.2 (10)	97	10/10	9.9 (10)	94	10/10
2-7	10.8 (10)	10/10	11.4 (10)	106	10/10	11.5 (10)	106	10/10	10.5 (10)	97	10/10	10.4 (10)	96	10/10	10.0 (10)	93	10/10

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

TABLE 6 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES IN MALE RAT (THIRTEEN-WEEK STUDY)

Week on Study	Control		80 ppm			400 ppm			2000 ppm			10000 ppm			50000 ppm		
	Av.Wt.	No.of Surviv. <10>	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.
0	124 (10)	10/10	124 (10)	100	10/10	124 (10)	100	10/10	124 (10)	100	10/10	124 (10)	100	10/10	124 (10)	100	10/10
1	149 (10)	10/10	149 (10)	100	10/10	149 (10)	100	10/10	146 (10)	98	10/10	142 (10)	95	10/10	141 (10)	95	10/10
2	182 (10)	10/10	185 (10)	102	10/10	185 (10)	102	10/10	180 (10)	99	10/10	175 (10)	96	10/10	172 (10)	95	10/10
3	209 (10)	10/10	212 (10)	101	10/10	210 (10)	100	10/10	204 (10)	98	10/10	198 (10)	95	10/10	196 (10)	94	10/10
4	229 (10)	10/10	229 (10)	100	10/10	227 (10)	99	10/10	221 (10)	97	10/10	217 (10)	95	10/10	214 (10)	93	10/10
5	245 (10)	10/10	247 (10)	101	10/10	244 (10)	100	10/10	237 (10)	97	10/10	234 (10)	96	10/10	232 (10)	95	10/10
6	259 (10)	10/10	261 (10)	101	10/10	256 (10)	99	10/10	252 (10)	97	10/10	248 (10)	96	10/10	245 (10)	95	10/10
7	275 (10)	10/10	276 (10)	100	10/10	270 (10)	98	10/10	265 (10)	96	10/10	260 (10)	95	10/10	260 (10)	95	10/10
8	290 (10)	10/10	294 (10)	101	10/10	286 (10)	99	10/10	280 (10)	97	10/10	275 (10)	95	10/10	274 (10)	94	10/10
9	298 (10)	10/10	304 (10)	102	10/10	296 (10)	99	10/10	291 (10)	98	10/10	286 (10)	96	10/10	285 (10)	96	10/10
10	310 (10)	10/10	316 (10)	102	10/10	307 (10)	99	10/10	301 (10)	97	10/10	295 (10)	95	10/10	295 (10)	95	10/10
11	321 (10)	10/10	326 (10)	102	10/10	317 (10)	99	10/10	313 (10)	98	10/10	307 (10)	96	10/10	307 (10)	96	10/10
12	328 (10)	10/10	337 (10)	103	10/10	328 (10)	100	10/10	322 (10)	98	10/10	314 (10)	96	10/10	315 (10)	96	10/10
13	337 (10)	10/10	345 (10)	102	10/10	335 (10)	99	10/10	329 (10)	98	10/10	322 (10)	96	10/10	323 (10)	96	10/10

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

TABLE 7 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES IN FEMALE RAT (THIRTEEN-WEEK STUDY)

Week on Study	Control		80 ppm			400 ppm			2000 ppm			10000 ppm			50000 ppm		
	Av.Wt.	No.of Surviv. <10>	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.	Av.Wt.	% of cont. <10>	No.of Surviv.
0	103 (10)	10/10	103 (10)	100	10/10	103 (10)	100	10/10	103 (10)	100	10/10	103 (10)	100	10/10	103 (10)	100	10/10
1	116 (10)	10/10	118 (10)	102	10/10	116 (10)	100	10/10	114 (10)	98	10/10	113 (10)	97	10/10	107 (10)	92	10/10
2	132 (10)	10/10	135 (10)	102	10/10	130 (10)	98	10/10	130 (10)	98	10/10	130 (10)	98	10/10	121 (10)	92	10/10
3	143 (10)	10/10	144 (10)	101	10/10	138 (10)	97	10/10	139 (10)	97	10/10	138 (10)	97	10/10	130 (10)	91	10/10
4	148 (10)	10/10	152 (10)	103	10/10	144 (10)	97	10/10	144 (10)	97	10/10	144 (10)	97	10/10	136 (10)	92	10/10
5	157 (10)	10/10	160 (10)	102	10/10	151 (10)	96	10/10	150 (10)	96	10/10	151 (10)	96	10/10	140 (10)	89	10/10
6	162 (10)	10/10	166 (10)	102	10/10	156 (10)	96	10/10	155 (10)	96	10/10	154 (10)	95	10/10	145 (10)	90	10/10
7	167 (10)	10/10	170 (10)	102	10/10	159 (10)	95	10/10	161 (10)	96	10/10	158 (10)	95	10/10	151 (10)	90	10/10
8	173 (10)	10/10	175 (10)	101	10/10	161 (10)	93	10/10	162 (10)	94	10/10	161 (10)	93	10/10	156 (10)	90	10/10
9	178 (10)	10/10	180 (10)	101	10/10	167 (10)	94	10/10	167 (10)	94	10/10	164 (10)	92	10/10	156 (10)	88	10/10
10	175 (10)	10/10	174 (10)	99	10/10	170 (10)	97	10/10	172 (10)	98	10/10	167 (10)	95	10/10	159 (10)	91	10/10
11	185 (10)	10/10	186 (10)	101	10/10	173 (10)	94	10/10	175 (10)	95	10/10	170 (10)	92	10/10	162 (10)	88	10/10
12	186 (10)	10/10	190 (10)	102	10/10	177 (10)	95	10/10	178 (10)	96	10/10	173 (10)	93	10/10	164 (10)	88	10/10
13	191 (10)	10/10	193 (10)	101	10/10	181 (10)	95	10/10	182 (10)	95	10/10	176 (10)	92	10/10	166 (10)	87	10/10

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

TABLE 8 FOOD CONSUMPTION IN MALE RAT (THIRTEEN-WEEK STUDY)

Week on Study	Control Av.FC.	Control No.of Surviv. <10>	80 ppm Av.FC.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.FC.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.FC.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.FC.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
1	12.3 (10)	10/10	12.5 (10)	102	10/10	12.4 (10)	101	10/10	11.9 (10)	97	10/10	11.1 (10)	90	10/10	10.8 (10)	88	10/10
2	13.5 (10)	10/10	13.9 (10)	103	10/10	14.0 (10)	104	10/10	13.7 (10)	101	10/10	13.3 (10)	99	10/10	13.6 (10)	101	10/10
3	14.7 (10)	10/10	15.1 (10)	103	10/10	14.9 (10)	101	10/10	14.3 (10)	97	10/10	14.2 (10)	97	10/10	14.6 (10)	99	10/10
4	14.9 (10)	10/10	15.2 (10)	102	10/10	14.8 (10)	99	10/10	14.6 (10)	98	10/10	14.6 (10)	98	10/10	15.0 (10)	101	10/10
5	15.0 (10)	10/10	16.1 (10)	107	10/10	15.6 (10)	104	10/10	15.3 (10)	102	10/10	15.0 (10)	100	10/10	15.7 (10)	105	10/10
6	14.8 (10)	10/10	16.1 (10)	109	10/10	15.3 (10)	103	10/10	15.4 (10)	104	10/10	15.0 (10)	101	10/10	15.7 (10)	106	10/10
7	15.3 (10)	10/10	16.3 (10)	107	10/10	15.3 (10)	100	10/10	15.1 (10)	99	10/10	15.0 (10)	98	10/10	16.0 (10)	105	10/10
8	15.9 (10)	10/10	16.8 (10)	106	10/10	15.7 (10)	99	10/10	15.5 (10)	97	10/10	15.3 (10)	96	10/10	16.3 (10)	103	10/10
9	16.0 (10)	10/10	17.0 (10)	106	10/10	15.9 (10)	99	10/10	15.6 (10)	98	10/10	15.6 (10)	98	10/10	16.6 (10)	104	10/10
10	15.9 (10)	10/10	16.6 (10)	104	10/10	15.5 (10)	97	10/10	15.6 (10)	98	10/10	15.4 (10)	97	10/10	16.4 (10)	103	10/10
11	16.5 (10)	10/10	17.1 (10)	104	10/10	16.2 (10)	98	10/10	16.0 (10)	97	10/10	15.6 (10)	95	10/10	16.6 (10)	101	10/10
12	16.5 (10)	10/10	17.1 (10)	104	10/10	16.4 (10)	99	10/10	16.1 (10)	98	10/10	15.8 (10)	96	10/10	17.1 (10)	104	10/10
13	16.4 (10)	10/10	16.7 (10)	102	10/10	15.9 (10)	97	10/10	15.8 (10)	96	10/10	15.9 (10)	97	10/10	17.0 (10)	104	10/10

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

TABLE 9 FOOD CONSUMPTION IN FEMALE RAT (THIRTEEN-WEEK STUDY)

Week on Study	Control Av.FC.	Control No.of Surviv. <10>	80 ppm Av.FC.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.FC.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.FC.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.FC.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
1	10.8 (10)	10/10	10.9 (10)	101	10/10	10.4 (10)	96	10/10	9.8 (10)	91	10/10	9.3 (10)	86	10/10	8.1 (10)	75	10/10
2	11.0 (10)	10/10	11.3 (10)	103	10/10	10.7 (10)	97	10/10	10.6 (10)	96	10/10	10.6 (10)	96	10/10	9.9 (10)	90	10/10
3	11.4 (10)	10/10	11.6 (10)	102	10/10	11.0 (9)	96	10/10	11.1 (10)	97	10/10	10.8 (10)	95	10/10	10.0 (10)	88	10/10
4	11.3 (10)	10/10	11.5 (10)	102	10/10	10.6 (10)	94	10/10	10.8 (10)	96	10/10	10.8 (10)	96	10/10	10.0 (10)	88	10/10
5	12.0 (10)	10/10	12.2 (10)	102	10/10	11.4 (10)	95	10/10	11.3 (10)	94	10/10	11.0 (10)	92	10/10	10.1 (10)	84	10/10
6	11.4 (10)	10/10	11.6 (10)	102	10/10	10.6 (10)	93	10/10	10.6 (10)	93	10/10	10.6 (10)	93	10/10	9.7 (10)	85	10/10
7	11.6 (10)	10/10	11.7 (10)	101	10/10	10.5 (10)	91	10/10	11.4 (10)	98	10/10	10.5 (10)	91	10/10	9.8 (10)	84	10/10
8	11.8 (10)	10/10	11.4 (10)	97	10/10	9.7 (10)	82	10/10	10.1 (10)	86	10/10	10.4 (10)	88	10/10	9.9 (10)	84	10/10
9	11.9 (10)	10/10	11.9 (10)	100	10/10	11.1 (10)	93	10/10	11.1 (10)	93	10/10	10.7 (10)	90	10/10	9.7 (10)	82	10/10
10	11.5 (10)	10/10	11.0 (10)	96	10/10	10.8 (10)	94	10/10	11.0 (10)	96	10/10	10.3 (10)	90	10/10	9.6 (10)	83	10/10
11	12.5 (10)	10/10	12.3 (10)	98	10/10	11.0 (10)	88	10/10	11.5 (10)	92	10/10	10.5 (10)	84	10/10	9.9 (10)	79	10/10
12	11.6 (10)	10/10	12.3 (10)	106	10/10	11.2 (10)	97	10/10	11.0 (10)	95	10/10	10.5 (10)	91	10/10	9.8 (10)	84	10/10
13	12.3 (10)	10/10	12.0 (10)	98	10/10	11.1 (10)	90	10/10	11.4 (10)	93	10/10	10.7 (10)	87	10/10	9.9 (10)	80	10/10

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

TABLE 10 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES IN MALE MOUSE (TWO-WEEK STUDY)

Week-Day on Study	Control Av.Wt.	Control No.of Surviv. <10>	80 ppm Av.Wt.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.Wt.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.Wt.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.Wt.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
0-0	23.5 (10)	10/10	23.6 (10)	100	10/10	23.5 (10)	100	10/10	23.5 (10)	100	10/10	23.5 (10)	100	10/10	23.5 (10)	100	10/10
1-1	23.2 (10)	10/10	23.1 (10)	100	10/10	23.3 (10)	100	10/10	23.3 (10)	100	10/10	23.3 (10)	100	10/10	22.2 (10)	96	10/10
1-3	22.7 (10)	10/10	22.9 (10)	101	10/10	22.9 (10)	101	10/10	23.1 (10)	102	10/10	22.9 (10)	101	10/10	22.3 (10)	98	10/10
1-7	23.7 (10)	10/10	23.6 (10)	100	10/10	23.7 (10)	100	10/10	23.6 (10)	100	10/10	23.3 (10)	98	10/10	22.4 (10)	95	10/10
2-3	23.7 (10)	10/10	23.9 (10)	101	10/10	23.9 (10)	101	10/10	23.5 (10)	99	10/10	23.3 (10)	98	10/10	22.6 (10)	95	10/10
2-7	24.7 (10)	10/10	24.4 (10)	99	10/10	24.5 (10)	99	10/10	24.2 (10)	98	10/10	24.0 (10)	97	10/10	22.6 (10)	91	10/10

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

TABLE 11 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES IN FEMALE MOUSE (TWO-WEEK STUDY)

Week-Day on Study	Control Av.Wt.	Control No.of Surviv. <10>	80 ppm Av.Wt.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.Wt.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.Wt.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.Wt.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
0-0	18.9 (10)	10/10	18.9 (10)	100	10/10	18.9 (10)	100	10/10	18.9 (10)	100	10/10	18.9 (10)	100	10/10	18.9 (10)	100	10/10
1-1	18.7 (10)	10/10	18.8 (10)	101	10/10	18.5 (10)	99	10/10	18.5 (10)	99	10/10	18.2 (10)	97	10/10	17.7 (10)	95	10/10
1-3	18.4 (10)	10/10	18.6 (10)	101	10/10	18.3 (10)	99	10/10	18.3 (10)	99	10/10	18.1 (10)	98	10/10	17.6 (10)	96	10/10
1-7	18.9 (10)	10/10	18.8 (10)	99	10/10	18.6 (10)	98	10/10	18.5 (10)	98	10/10	18.5 (10)	98	10/10	18.0 (10)	95	10/10
2-3	18.9 (10)	10/10	19.4 (10)	103	10/10	19.8 (10)	105	10/10	19.0 (10)	101	10/10	18.8 (10)	99	10/10	18.4 (10)	97	10/10
2-7	19.3 (10)	10/10	19.8 (10)	103	10/10	19.3 (10)	100	10/10	19.3 (10)	100	10/10	18.5 (10)	96	10/10	18.3 (10)	95	10/10

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

TABLE 12 FOOD CONSUMPTION IN MALE MOUSE (TWO-WEEK STUDY)

Week-Day on Study	Control Av.FC.	Control No.of Surviv. <10>	80 ppm Av.FC.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.FC.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.FC.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.FC.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
1-3	4.9 (10)	10/10	4.4 (10)	90	10/10	4.9 (10)	100	10/10	5.1 (10)	104	10/10	4.6 (10)	94	10/10	4.5 (10)	92	10/10
1-7	5.4 (10)	10/10	4.9 (10)	91	10/10	5.3 (10)	98	10/10	5.3 (10)	98	10/10	5.1 (10)	94	10/10	5.1 (10)	94	10/10
2-3	4.7 (10)	10/10	4.3 (10)	91	10/10	4.6 (10)	98	10/10	4.5 (10)	96	10/10	4.4 (10)	94	10/10	4.3 (10)	91	10/10
2-7	5.1 (10)	10/10	5.0 (10)	98	10/10	4.9 (10)	96	10/10	4.8 (10)	94	10/10	4.8 (10)	94	10/10	4.6 (10)	90	10/10

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

TABLE 13 FOOD CONSUMPTION IN FEMALE MOUSE (TWO-WEEK STUDY)

Week-Day on Study	Control Av.FC.	Control No.of Surviv. <10>	80 ppm Av.FC.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.FC.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.FC.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.FC.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
1-3	4.3 (10)	10/10	4.8 (10)	112	10/10	4.5 (10)	105	10/10	4.2 (10)	98	10/10	4.0 (10)	93	10/10	3.9 (10)	91	10/10
1-7	4.6 (10)	10/10	4.7 (10)	102	10/10	4.7 (10)	102	10/10	4.5 (10)	98	10/10	4.2 (10)	91	10/10	4.5 (10)	98	10/10
2-3	4.1 (10)	10/10	4.4 (10)	107	10/10	4.4 (10)	107	10/10	4.1 (10)	100	10/10	3.9 (10)	95	10/10	4.0 (10)	98	10/10
2-7	4.5 (10)	10/10	4.4 (10)	98	10/10	4.5 (10)	100	10/10	4.4 (10)	98	10/10	4.0 (10)	89	10/10	4.1 (10)	91	10/10

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

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

Week on Study	Control Av.Wt.	Control No.of Surviv. <10>	80 ppm Av.Wt.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.Wt.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.Wt.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.Wt.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
0	23.0 (10)	10/10	23.0 (10)	100	10/10	23.0 (10)	100	10/10	23.0 (10)	100	10/10	23.0 (10)	100	10/10	23.0 (10)	100	10/10
1	24.1 (10)	10/10	23.5 (10)	98	10/10	23.4 (10)	97	10/10	23.3 (10)	97	10/10	23.1 (10)	96	10/10	22.4 (10)	93	10/10
2	25.2 (10)	10/10	24.5 (10)	97	10/10	24.4 (10)	97	10/10	23.8 (10)	94	10/10	23.3 (10)	92	10/10	22.9 (10)	91	10/10
3	26.0 (10)	10/10	25.5 (10)	98	10/10	24.9 (10)	96	10/10	24.4 (10)	94	10/10	23.9 (10)	92	10/10	23.4 (10)	90	10/10
4	26.8 (10)	10/10	26.3 (10)	98	10/10	25.8 (10)	96	10/10	25.5 (10)	95	10/10	24.5 (10)	91	10/10	23.9 (10)	89	10/10
5	27.6 (10)	10/10	27.0 (10)	98	10/10	26.6 (10)	96	10/10	25.9 (10)	94	10/10	24.9 (10)	90	10/10	24.4 (10)	88	10/10
6	28.5 (10)	10/10	28.1 (10)	99	10/10	27.5 (10)	96	10/10	26.7 (10)	94	10/10	25.5 (10)	89	10/10	24.5 (10)	86	10/10
7	28.8 (10)	10/10	28.0 (10)	97	10/10	27.6 (10)	96	10/10	26.9 (10)	93	10/10	25.9 (10)	90	10/10	24.7 (10)	86	10/10
8	30.4 (10)	10/10	29.7 (10)	98	10/10	28.9 (10)	95	10/10	27.9 (10)	92	10/10	26.4 (10)	87	10/10	25.0 (10)	82	10/10
9	31.2 (10)	10/10	30.3 (10)	97	10/10	29.5 (10)	95	10/10	28.7 (10)	92	10/10	26.8 (10)	86	10/10	25.1 (10)	80	10/10
10	32.2 (10)	10/10	31.3 (10)	97	10/10	30.6 (10)	95	10/10	29.6 (10)	92	10/10	27.3 (10)	85	10/10	25.7 (10)	80	10/10
11	32.7 (10)	10/10	32.1 (10)	98	10/10	31.2 (10)	95	10/10	30.1 (10)	92	10/10	27.8 (10)	85	10/10	25.8 (10)	79	10/10
12	32.6 (10)	10/10	31.6 (10)	97	10/10	31.4 (10)	96	10/10	29.9 (10)	92	10/10	27.8 (10)	85	10/10	25.9 (10)	79	10/10
13	33.6 (10)	10/10	32.7 (10)	97	10/10	32.5 (10)	97	10/10	31.0 (10)	92	10/10	28.4 (10)	85	10/10	26.2 (10)	78	10/10

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

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

Week on Study	Control Av.Wt.	Control No.of Surviv. <10>	80 ppm Av.Wt.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.Wt.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.Wt.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.Wt.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
0	19.1 (10)	10/10	19.1 (10)	100	10/10	19.1 (10)	100	10/10	19.1 (10)	100	10/10	19.1 (10)	100	10/10	19.1 (10)	100	10/10
1	19.7 (10)	10/10	19.3 (10)	98	10/10	19.5 (10)	99	10/10	18.4 (10)	98	10/10	18.8 (10)	95	10/10	17.8 (10)	90	10/10
2	20.3 (10)	10/10	20.0 (10)	99	10/10	19.9 (10)	98	10/10	19.8 (10)	98	10/10	19.2 (10)	95	10/10	19.1 (10)	94	10/10
3	20.7 (10)	10/10	20.5 (10)	99	10/10	20.9 (9)	101	9/10	20.2 (10)	98	10/10	19.5 (10)	94	10/10	19.5 (10)	94	10/10
4	21.2 (10)	10/10	21.5 (10)	101	10/10	21.4 (9)	101	9/10	20.8 (10)	98	10/10	19.9 (10)	94	10/10	19.7 (10)	93	10/10
5	21.7 (10)	10/10	21.2 (10)	98	10/10	21.5 (9)	99	9/10	21.3 (10)	98	10/10	20.1 (10)	93	10/10	19.9 (10)	92	10/10
6	22.4 (10)	10/10	22.4 (10)	100	10/10	22.6 (9)	101	9/10	22.4 (10)	100	10/10	21.1 (10)	94	10/10	20.4 (10)	91	10/10
7	22.2 (10)	10/10	22.2 (10)	100	10/10	22.5 (9)	101	9/10	21.9 (10)	99	10/10	20.9 (10)	94	10/10	20.9 (10)	94	10/10
8	22.6 (10)	10/10	22.6 (10)	100	10/10	22.8 (9)	101	9/10	22.4 (10)	99	10/10	21.4 (10)	95	10/10	21.1 (10)	93	10/10
9	22.6 (10)	10/10	22.6 (10)	100	10/10	22.6 (9)	100	9/10	22.5 (10)	100	10/10	21.5 (10)	95	10/10	21.6 (10)	96	10/10
10	23.7 (10)	10/10	23.3 (10)	98	10/10	23.4 (9)	99	9/10	22.9 (10)	97	10/10	22.2 (10)	94	10/10	22.0 (10)	93	10/10
11	23.9 (10)	10/10	23.7 (10)	99	10/10	23.7 (9)	99	9/10	23.6 (10)	99	10/10	22.4 (10)	94	10/10	22.0 (10)	92	10/10
12	23.8 (10)	10/10	23.9 (10)	100	10/10	24.0 (9)	101	9/10	23.5 (10)	99	10/10	22.7 (10)	95	10/10	22.0 (10)	92	10/10
13	24.9 (10)	10/10	23.4 (10)	98	10/10	23.7 (9)	99	9/10	23.3 (10)	97	10/10	22.3 (10)	93	10/10	22.0 (10)	92	10/10

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

TABLE 16 FOOD CONSUMPTION IN MALE MOUSE (THIRTEEN-WEEK STUDY)

Week on Study	Control Av.FC.	Control No.of Surviv. <10>	80 ppm Av.FC.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.FC.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.FC.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.FC.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
1	5.2 (10)	10/10	5.1 (10)	98	10/10	4.9 (10)	94	10/10	4.8 (10)	92	10/10	4.7 (10)	90	10/10	4.6 (10)	88	10/10
2	4.9 (10)	10/10	5.0 (10)	102	10/10	4.8 (10)	98	10/10	4.7 (10)	96	10/10	4.3 (10)	88	10/10	4.3 (10)	88	10/10
3	4.8 (10)	10/10	4.9 (10)	102	10/10	4.7 (10)	98	10/10	4.4 (10)	92	10/10	4.1 (10)	85	10/10	4.0 (10)	83	10/10
4	4.9 (10)	10/10	4.9 (10)	100	10/10	4.9 (10)	100	10/10	4.6 (10)	94	10/10	4.4 (10)	90	10/10	4.2 (10)	86	10/10
5	5.3 (10)	10/10	5.2 (10)	98	10/10	5.3 (10)	100	10/10	4.8 (10)	91	10/10	4.7 (10)	89	10/10	4.4 (10)	83	10/10
6	5.2 (10)	10/10	5.3 (10)	102	10/10	5.3 (10)	102	10/10	4.9 (10)	94	10/10	4.6 (10)	88	10/10	4.1 (10)	79	10/10
7	5.0 (10)	10/10	5.2 (10)	104	10/10	5.0 (10)	100	10/10	4.8 (10)	96	10/10	4.5 (10)	90	10/10	4.2 (10)	84	10/10
8	5.7 (10)	10/10	5.9 (10)	104	10/10	5.7 (10)	100	10/10	5.2 (10)	91	10/10	5.2 (10)	91	10/10	4.4 (10)	77	10/10
9	5.7 (10)	10/10	5.8 (10)	102	10/10	5.9 (10)	104	10/10	5.4 (10)	95	10/10	5.0 (10)	88	10/10	4.5 (10)	79	10/10
10	5.0 (10)	10/10	5.3 (10)	106	10/10	5.2 (10)	104	10/10	4.9 (10)	98	10/10	4.6 (10)	92	10/10	4.2 (10)	84	10/10
11	4.7 (10)	10/10	4.8 (10)	102	10/10	5.0 (10)	106	10/10	4.6 (10)	98	10/10	4.6 (10)	98	10/10	4.2 (10)	89	10/10
12	5.2 (10)	10/10	5.1 (10)	98	10/10	5.1 (10)	98	10/10	4.8 (10)	92	10/10	4.6 (10)	88	10/10	4.2 (10)	81	10/10
13	5.1 (10)	10/10	5.5 (10)	108	10/10	5.5 (10)	108	10/10	5.2 (10)	102	10/10	4.7 (10)	92	10/10	4.3 (10)	84	10/10

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

TABLE 17 FOOD CONSUMPTION IN FEMALE MOUSE (THIRTEEN-WEEK STUDY)

Week on Study	Control Av.FC.	Control No.of Surviv. <10>	80 ppm Av.FC.	80 ppm % of cont. <10>	80 ppm No.of Surviv.	400 ppm Av.FC.	400 ppm % of cont. <10>	400 ppm No.of Surviv.	2000 ppm Av.FC.	2000 ppm % of cont. <10>	2000 ppm No.of Surviv.	10000 ppm Av.FC.	10000 ppm % of cont. <10>	10000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <10>	50000 ppm No.of Surviv.
1	4.9 (10)	10/10	5.2 (10)	106	10/10	5.3 (10)	108	10/10	4.9 (10)	100	10/10	4.5 (10)	92	10/10	4.4 (10)	90	10/10
2	4.5 (10)	10/10	4.8 (10)	107	10/10	4.8 (10)	107	10/10	4.6 (10)	102	10/10	3.9 (10)	87	10/10	4.1 (10)	91	10/10
3	4.8 (10)	10/10	5.1 (10)	106	10/10	5.0 (9)	104	9/10	4.7 (10)	98	10/10	4.0 (10)	83	10/10	3.8 (10)	79	10/10
4	4.8 (10)	10/10	4.7 (10)	98	10/10	5.1 (9)	106	9/10	4.9 (10)	102	10/10	4.5 (10)	94	10/10	4.0 (10)	83	10/10
5	5.3 (10)	10/10	5.6 (10)	106	10/10	5.6 (9)	106	9/10	5.5 (10)	104	10/10	4.7 (10)	89	10/10	4.5 (10)	85	10/10
6	5.1 (10)	10/10	5.4 (10)	106	10/10	5.3 (9)	104	9/10	5.5 (10)	108	10/10	4.8 (10)	94	10/10	4.5 (10)	88	10/10
7	5.0 (10)	10/10	5.6 (10)	112	10/10	5.4 (9)	108	9/10	5.3 (10)	106	10/10	4.6 (10)	92	10/10	4.5 (10)	90	10/10
8	5.6 (10)	10/10	6.1 (10)	109	10/10	6.0 (9)	107	9/10	5.9 (10)	105	10/10	5.4 (10)	96	10/10	4.8 (10)	86	10/10
9	5.8 (10)	10/10	6.3 (10)	109	10/10	6.2 (9)	107	9/10	6.2 (10)	107	10/10	5.3 (10)	91	10/10	5.2 (10)	90	10/10
10	5.0 (10)	10/10	5.7 (10)	114	10/10	5.3 (9)	106	9/10	5.5 (10)	110	10/10	4.8 (10)	96	10/10	4.6 (10)	92	10/10
11	5.3 (10)	10/10	5.5 (10)	104	10/10	5.3 (9)	100	9/10	5.6 (10)	106	10/10	4.9 (10)	92	10/10	4.7 (10)	89	10/10
12	5.2 (10)	10/10	5.7 (10)	110	10/10	5.6 (9)	108	9/10	5.8 (10)	112	10/10	4.9 (10)	94	10/10	4.9 (10)	94	10/10
13	5.5 (10)	10/10	6.0 (10)	109	10/10	5.6 (9)	102	9/10	5.9 (10)	107	10/10	5.1 (10)	93	10/10	5.0 (10)	91	10/10

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