

1, 1, 1 - トリクロロエタンのラット及びマウスを用いた
吸 入 に よ る が ん 原 性 予 備 試 験 報 告 書

試験番号

2 週 間 : ラット/0156 ; マウス/0157

1 3 週 間 : ラット/0166 ; マウス/0167

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TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS
IN THE INHALATION STUDIES OF 1,1,1-TRICHLOROETHANE

Two-Week Studies	Thirteen-Week Studies
<Method of Administration> Inhalation	Inhalation
<Number of Groups> Male 6, Female 6	Male 6, Female 6
<Size of Groups> 10 males and 10 females of each species	10 males and 10 females of each species
<Animals> Strain and Species F344/DuCrj(Fischer)rat Crj:BDF1mouse Animal Source Charles River Japan, Inc. Duration Held Before Study 2 wk Age When Placed on Study 6 wk Age When Killed 8 wk	F344/DuCrj(Fischer)rat Crj:BDF1mouse Charles River Japan, Inc. 2 wk 6 wk 19 wk
<Exposure Concentrations> Rat : 0,2000,3000,4400,6700 or 10000ppm Mouse: 0,1300,2000,3000,4500 or 6700ppm	Rat : 0,2000,3000,4400,6700 or 10000ppm Mouse: 0,3000,4400,6700,10000 or 15000ppm
<Duration of Exposure> 5 d/wk for 2 wk	5 d/wk for 13 wk
<Animal Maintenance> Feed CRF-1 (Oriental Yeast Co., Ltd.) Sterilized by γ -ray Available <i>ad libitum</i> Water Filtrated and sterilized by ultraviolet rays Automatic watering system Available <i>ad libitum</i> Animals per Cage Single (stainless steel wire) Animal Room Environment Barrier system Temperature: $22 \pm 2^\circ\text{C}$ Humidity: $60 \pm 10\%$ Fluorescent light: 12 h/d Room air changes: 15-17 changes/h Chamber Environment Temperature: $20-24^\circ\text{C}$ Humidity: 45-70% Fluorescent light: 12 h/d Room air changes: 12 changes/h	Same as two-week studies Same as two-week studies Same as two-week studies Same as two-week studies Chamber Environment Temperature: $21-25^\circ\text{C}$ Humidity: 45-70% Fluorescent light: 12 h/d Room air changes: 12 ± 1 changes/h
<Type and Frequency of Observation> Clinical Sign Observed 2 per d (1 per d without Exposure day) Body weight Weighed 0-0, 1-1, 1-7 and 2-7(wk-d) Food Consumption Weighed 1-7 and 2-7(wk-d)	Observed 1 per d Weighed 1 per wk Weighed 1 per wk

TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS
IN THE INHALATION STUDIES OF 1,1,1-TRICHLOROETHANE(Continued)

Two-Week Studies	Thirteen-Week Studies
<Hematology> Red blood cell, Hemoglobin,Hematocrit, Mean corpuscular volume(MCV), Mean corpuscular Hemoglobin(MCH), Mean corpuscular Hemoglobin concentration(MCHC), Platelet,White blood cell(WBC), Differential WBC	Red blood cell, Hemoglobin,Hematocrit, Mean corpuscular volume(MCV), Mean corpuscular Hemoglobin(MCH), Mean corpuscular Hemoglobin concentration(MCHC), Platelet,White blood cell(WBC), Differential WBC
<Biochemistry> Total protein,Albumin, A/G ratio,T-bilirubin,Glucose, T-cholesterol, Glutamic oxaloacetic transaminase(GOT), Glutamic pyruvic transaminase(GPT), Lactate dehydrogenase(LDH), Creatine phosphokinase(CPK), Urea nitrogen, Sodium,Potassium,Chloride, Calcium,Inorganic phosphorus	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), Alkaline phosphatase(ALP), γ-Glutamyl transpeptidase(G-GTP)<rat only>, Creatine phosphokinase(CPK), Urea nitrogen,Creatinine<rat only>, Sodium,Potassium,Chloride, Calcium,Inorganic phosphorus
<Urinalysis> None	pH,Protein,Glucose,Ketone body, Bilirubin<rat only>,Occult blood, Urobilinogen
<Necropsy> Necropsy performed on all animals	Same as two-week studies
<Organ weight> None	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: 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, vagina, mammary gland, brain, spinal cord, peripheral nerve, eye, harderian gland, muscle, bone	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, vagina, 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		2000 ppm			3000 ppm			4400 ppm			6700 ppm			10000 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.
0-0	131 (10)	10/10	131 (10)	100	10/10	131 (10)	100	10/10	131 (10)	100	10/10	131 (10)	100	10/10	131 (10)	100	10/10
1-1	133 (10)	10/10	132 (10)	99	10/10	131 (10)	98	10/10	129 (10)	97	10/10	127 (10)	95	10/10	125 (10)	94	10/10
1-7	158 (10)	10/10	153 (10)	97	10/10	151 (10)	96	10/10	149 (10)	94	10/10	145 (10)	92	10/10	134 (10)	85	10/10
2-7	185 (10)	10/10	178 (10)	96	10/10	178 (10)	96	10/10	176 (10)	95	10/10	170 (10)	92	10/10	151 (10)	82	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		2000 ppm			3000 ppm			4400 ppm			6700 ppm			10000 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.
0-0	104 (10)	10/10	104 (10)	100	10/10	104 (10)	100	10/10	104 (10)	100	10/10	104 (10)	100	10/10	103 (10)	99	10/10
1-1	105 (10)	10/10	103 (10)	98	10/10	103 (10)	98	10/10	102 (10)	97	10/10	101 (10)	96	10/10	100 (10)	95	10/10
1-7	117 (10)	10/10	116 (10)	99	10/10	115 (10)	98	10/10	113 (10)	97	10/10	112 (10)	96	10/10	106 (10)	91	10/10
2-7	128 (10)	10/10	129 (10)	101	10/10	126 (10)	98	10/10	127 (10)	99	10/10	126 (10)	98	10/10	115 (10)	90	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		2000 ppm			3000 ppm			4400 ppm			6700 ppm			10000 ppm		
	Av.FC.	No.of Surviv. <10>	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.
1-7	16.6 (10)	10/10	15.4 (10)	93	10/10	15.2 (10)	92	10/10	14.8 (10)	89	10/10	14.6 (10)	88	10/10	12.1 (10)	73	10/10
2-7	16.6 (10)	10/10	16.7 (10)	101	10/10	15.9 (10)	96	10/10	16.0 (10)	96	10/10	15.7 (10)	95	10/10	13.4 (10)	81	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		2000 ppm			3000 ppm			4400 ppm			6700 ppm			10000 ppm		
	Av.FC.	No.of Surviv. <10>	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.
1-7	12.7 (10)	10/10	12.2 (10)	96	10/10	11.7 (10)	92	10/10	11.5 (10)	91	10/10	11.3 (10)	89	10/10	9.7 (10)	76	10/10
2-7	12.0 (10)	10/10	12.3 (10)	103	10/10	11.2 (10)	93	10/10	12.1 (10)	101	10/10	11.8 (10)	98	10/10	10.8 (10)	90	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-Day on Study	Control		2000 ppm			3000 ppm			4400 ppm			6700 ppm			10000 ppm		
	Au.Wt.	No.of Surviv. <10>	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.
0-0	132 (10)	10/10	132 (10)	100	10/10	131 (10)	99	10/10	132 (10)	100	10/10	132 (10)	100	10/10	132 (10)	100	10/10
1-7	163 (10)	10/10	159 (10)	98	10/10	158 (10)	97	10/10	153 (10)	94	10/10	145 (10)	89	10/10	131 (10)	80	10/10
2-7	195 (10)	10/10	189 (10)	97	10/10	189 (10)	97	10/10	182 (10)	93	10/10	171 (10)	88	10/10	144 (10)	74	10/10
3-7	221 (10)	10/10	216 (10)	98	10/10	217 (10)	98	10/10	202 (10)	91	10/10	193 (10)	87	10/10	159 (10)	72	10/10
4-7	242 (10)	10/10	235 (10)	97	10/10	238 (10)	98	10/10	219 (10)	90	10/10	211 (10)	87	10/10	173 (10)	71	10/10
5-7	257 (10)	10/10	252 (10)	98	10/10	256 (10)	100	10/10	233 (10)	91	10/10	225 (10)	88	10/10	184 (9)	72	9/10
6-7	273 (10)	10/10	266 (10)	97	10/10	270 (10)	99	10/10	244 (10)	89	10/10	233 (10)	85	10/10	191 (9)	70	9/10
7-7	288 (10)	10/10	278 (10)	97	10/10	283 (10)	98	10/10	255 (10)	89	10/10	245 (10)	85	10/10	199 (9)	69	9/10
8-7	304 (10)	10/10	293 (10)	96	10/10	297 (10)	98	10/10	268 (10)	88	10/10	253 (10)	83	10/10	207 (9)	68	9/10
9-7	315 (10)	10/10	303 (10)	96	10/10	305 (10)	97	10/10	275 (10)	87	10/10	262 (10)	83	10/10	218 (7)	69	7/10
10-7	322 (10)	10/10	310 (10)	96	10/10	315 (10)	98	10/10	282 (10)	88	10/10	270 (10)	84	10/10	225 (7)	70	7/10
11-7	329 (10)	10/10	317 (10)	96	10/10	318 (10)	97	10/10	287 (10)	87	10/10	276 (10)	84	10/10	233 (7)	71	7/10
12-7	337 (10)	10/10	323 (10)	96	10/10	328 (10)	97	10/10	296 (10)	88	10/10	282 (10)	84	10/10	239 (7)	71	7/10
13-7	343 (10)	10/10	332 (10)	97	10/10	333 (10)	97	10/10	299 (10)	87	10/10	287 (10)	84	10/10	243 (7)	71	7/10
< >:No.of effective animals,():No.of measured animals																	
Au.Wt.: g																	

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

Week-Day on Study	Control		2000 ppm		3000 ppm		4400 ppm		6700 ppm		10000 ppm						
	Au.Wt.	No.of Surviv. <10>	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.
0-0	105 (10)	10/10	106 (10)	101	10/10	105 (10)	100	10/10	106 (10)	101	10/10	105 (10)	100	10/10	105 (10)	100	10/10
1-7	121 (10)	10/10	120 (10)	99	10/10	119 (10)	98	10/10	117 (10)	97	10/10	113 (10)	93	10/10	109 (10)	90	10/10
2-7	133 (10)	10/10	134 (10)	101	10/10	132 (10)	99	10/10	131 (10)	98	10/10	127 (10)	95	10/10	119 (10)	89	10/10
3-7	141 (10)	10/10	146 (10)	104	10/10	143 (10)	101	10/10	143 (10)	101	10/10	139 (10)	99	10/10	128 (10)	91	10/10
4-7	147 (10)	10/10	154 (10)	105	10/10	151 (10)	103	10/10	149 (10)	101	10/10	146 (10)	99	10/10	137 (10)	93	10/10
5-7	154 (10)	10/10	159 (10)	103	10/10	154 (10)	100	10/10	156 (10)	101	10/10	152 (10)	99	10/10	143 (10)	93	10/10
6-7	162 (10)	10/10	166 (10)	102	10/10	160 (10)	99	10/10	161 (10)	99	10/10	157 (10)	97	10/10	149 (10)	92	10/10
7-7	168 (10)	10/10	170 (10)	101	10/10	164 (10)	98	10/10	163 (10)	97	10/10	162 (10)	96	10/10	154 (10)	92	10/10
8-7	177 (10)	10/10	175 (10)	99	10/10	168 (10)	95	10/10	168 (10)	95	10/10	165 (10)	93	10/10	157 (10)	89	10/10
9-7	181 (10)	10/10	180 (10)	99	10/10	172 (10)	95	10/10	171 (10)	94	10/10	168 (10)	93	10/10	161 (10)	89	10/10
10-7	184 (10)	10/10	181 (10)	98	10/10	175 (10)	95	10/10	175 (10)	95	10/10	170 (10)	92	10/10	165 (10)	90	10/10
11-7	186 (10)	10/10	186 (10)	100	10/10	178 (10)	96	10/10	177 (10)	95	10/10	171 (10)	92	10/10	169 (10)	91	10/10
12-7	191 (10)	10/10	188 (10)	98	10/10	181 (10)	95	10/10	179 (10)	94	10/10	174 (10)	91	10/10	170 (10)	89	10/10
13-7	194 (10)	10/10	189 (10)	97	10/10	181 (10)	93	10/10	179 (10)	92	10/10	176 (10)	91	10/10	173 (10)	89	10/10
< >:No.of effective animals,():No.of measured animals																	
Au.Wt.: g																	

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

Week-Day on Study	Control		2000 ppm			3000 ppm			4400 ppm			6700 ppm			10000 ppm		
	Au.FC.	No.of Surviv. <10>	Au.FC.	% of cont. <10>	No.of Surviv.	Au.FC.	% of cont. <10>	No.of Surviv.	Au.FC.	% of cont. <10>	No.of Surviv.	Au.FC.	% of cont. <10>	No.of Surviv.	Au.FC.	% of cont. <10>	No.of Surviv.
1-7	16.0 (10)	10/10	15.2 (10)	95	10/10	15.5 (10)	97	10/10	14.3 (10)	89	10/10	12.7 (10)	79	10/10	10.7 (10)	67	10/10
2-7	17.7 (10)	10/10	17.1 (10)	97	10/10	17.3 (10)	98	10/10	16.5 (10)	93	10/10	15.2 (10)	86	10/10	12.1 (10)	68	10/10
3-7	18.8 (10)	10/10	18.7 (10)	99	10/10	19.4 (10)	103	10/10	17.9 (10)	95	10/10	16.6 (10)	88	10/10	13.0 (10)	69	10/10
4-7	18.0 (10)	10/10	18.6 (10)	103	10/10	18.6 (10)	103	10/10	16.9 (10)	94	10/10	16.8 (10)	93	10/10	13.5 (10)	75	10/10
5-7	17.6 (10)	10/10	18.5 (10)	105	10/10	18.6 (10)	106	10/10	17.2 (10)	98	10/10	17.2 (10)	98	10/10	14.3 (10)	81	9/10
6-7	18.1 (10)	10/10	18.1 (10)	100	10/10	18.0 (10)	99	10/10	17.2 (10)	95	10/10	16.4 (10)	91	10/10	13.9 (9)	77	9/10
7-7	18.1 (10)	10/10	17.6 (10)	97	10/10	18.2 (10)	101	10/10	17.2 (10)	95	10/10	16.9 (10)	93	10/10	14.2 (9)	78	9/10
8-7	18.2 (10)	10/10	17.9 (10)	98	10/10	18.5 (10)	102	10/10	17.1 (10)	94	10/10	16.6 (10)	91	10/10	14.6 (9)	80	9/10
9-7	18.1 (9)	10/10	17.9 (10)	99	10/10	18.6 (10)	103	10/10	17.0 (10)	94	10/10	16.6 (10)	92	10/10	14.6 (8)	81	7/10
10-7	18.3 (10)	10/10	18.1 (10)	99	10/10	18.5 (10)	101	10/10	17.6 (10)	96	10/10	17.1 (10)	93	10/10	14.7 (7)	80	7/10
11-7	18.3 (10)	10/10	17.9 (10)	98	10/10	18.2 (10)	99	10/10	17.0 (10)	93	10/10	16.7 (10)	91	10/10	14.7 (7)	80	7/10
12-7	17.5 (10)	10/10	17.0 (9)	97	10/10	17.7 (10)	101	10/10	16.6 (10)	95	10/10	16.6 (10)	95	10/10	15.2 (7)	87	7/10
13-7	18.2 (10)	10/10	17.8 (10)	98	10/10	17.7 (10)	97	10/10	16.7 (10)	92	10/10	16.6 (10)	91	10/10	14.8 (7)	81	7/10
< >:No.of effective animals,():No.of measured animals Au.FC.: g																	

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

Week-Day on Study	Control		2000 ppm			3000 ppm			4400 ppm			6700 ppm			10000 ppm		
	Au.FC.	No.of Surviv. <10>	Au.FC.	% of cont. <10>	No.of Surviv.	Au.FC.	% of cont. <10>	No.of Surviv.	Au.FC.	% of cont. <10>	No.of Surviv.	Au.FC.	% of cont. <10>	No.of Surviv.	Au.FC.	% of cont. <10>	No.of Surviv.
1-7	12.5 (10)	10/10	11.9 (10)	95	10/10	11.9 (10)	95	10/10	11.6 (10)	93	10/10	10.6 (10)	85	10/10	9.7 (10)	78	10/10
2-7	12.9 (10)	10/10	12.7 (10)	98	10/10	12.5 (10)	97	10/10	12.7 (10)	98	10/10	12.0 (10)	93	10/10	10.7 (10)	83	10/10
3-7	12.4 (10)	10/10	13.0 (10)	105	10/10	13.1 (10)	106	10/10	13.1 (10)	106	10/10	12.5 (10)	101	10/10	11.4 (10)	92	10/10
4-7	12.7 (10)	10/10	13.5 (10)	106	10/10	12.6 (10)	99	10/10	12.2 (10)	96	10/10	12.1 (10)	95	10/10	11.7 (10)	92	10/10
5-7	12.7 (10)	10/10	13.2 (10)	104	10/10	12.2 (10)	96	10/10	12.7 (10)	100	10/10	12.2 (10)	96	10/10	11.8 (10)	93	10/10
6-7	12.4 (10)	10/10	12.4 (10)	100	10/10	11.8 (10)	95	10/10	12.0 (10)	97	10/10	12.0 (10)	97	10/10	11.8 (10)	95	10/10
7-7	12.4 (10)	10/10	12.4 (10)	100	10/10	11.7 (10)	94	10/10	11.7 (10)	94	10/10	11.9 (10)	96	10/10	11.8 (10)	95	10/10
8-7	12.9 (10)	10/10	12.3 (10)	95	10/10	12.0 (10)	93	10/10	11.8 (10)	91	10/10	12.0 (10)	93	10/10	11.8 (10)	91	10/10
9-7	12.7 (10)	10/10	12.4 (10)	98	10/10	11.9 (10)	94	10/10	12.0 (10)	94	10/10	11.8 (10)	93	10/10	11.5 (10)	91	10/10
10-7	12.3 (10)	10/10	12.1 (10)	98	10/10	11.7 (10)	95	10/10	12.3 (10)	100	10/10	12.1 (10)	98	10/10	11.9 (10)	97	10/10
11-7	12.9 (10)	10/10	12.3 (10)	95	10/10	11.7 (10)	91	10/10	11.7 (10)	91	10/10	11.3 (10)	88	10/10	11.8 (10)	91	10/10
12-7	12.4 (10)	10/10	12.5 (10)	101	10/10	11.7 (10)	94	10/10	11.7 (10)	94	10/10	11.7 (10)	94	10/10	11.6 (10)	94	10/10
13-7	13.1 (10)	10/10	12.1 (10)	92	10/10	10.9 (10)	83	10/10	11.2 (10)	85	10/10	11.6 (10)	89	10/10	11.2 (10)	85	10/10
< >:No.of effective animals,():No.of measured animals Au.FC.: g																	

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

Week-Day on Study	Control		1300 ppm			2000 ppm			3000 ppm			4500 ppm			6700 ppm		
	Au.Wt.	No.of Surviv. <10>	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.
0-0	23.1 (10)	10/10	23.1 (10)	100	10/10	23.1 (10)	100	10/10	23.1 (10)	100	10/10	23.1 (10)	100	10/10	23.1 (10)	100	10/10
1-1	22.7 (10)	10/10	22.7 (10)	100	10/10	22.5 (10)	99	10/10	22.7 (10)	100	10/10	22.7 (10)	100	10/10	22.3 (10)	98	10/10
1-7	23.0 (10)	10/10	22.6 (10)	98	10/10	22.8 (10)	99	10/10	23.1 (10)	100	10/10	23.2 (10)	101	10/10	23.5 (10)	102	10/10
2-7	23.7 (10)	10/10	23.6 (10)	100	10/10	23.7 (10)	100	10/10	24.0 (10)	101	10/10	23.9 (10)	101	10/10	24.3 (10)	103	10/10
< >:No.of effective animals,():No.of measured animals Au.Wt.: g																	

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

Week-Day on Study	Control		1300 ppm			2000 ppm			3000 ppm			4500 ppm			6700 ppm		
	Au.Wt.	No.of Surviv. <10>	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.
0-0	19.9 (10)	10/10	19.9 (10)	100	10/10	19.9 (10)	100	10/10	19.8 (10)	99	10/10	19.9 (10)	100	10/10	19.9 (10)	100	10/10
1-1	19.3 (10)	10/10	19.1 (10)	99	10/10	19.0 (10)	98	10/10	19.2 (10)	99	10/10	19.2 (10)	99	10/10	19.2 (10)	99	10/10
1-7	19.8 (10)	10/10	19.8 (10)	100	10/10	19.5 (10)	98	10/10	19.4 (10)	98	10/10	19.8 (10)	100	10/10	20.2 (10)	102	10/10
2-7	20.0 (10)	10/10	20.2 (10)	97	10/10	20.4 (10)	98	10/10	20.6 (10)	99	10/10	21.0 (10)	100	10/10	21.1 (10)	101	10/10
< >:No.of effective animals,():No.of measured animals Au.Wt.: g																	

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

Week-Day on Study	Control		1300 ppm		2000 ppm		3000 ppm		4500 ppm		6700 ppm						
	Av.FC.	No.of Surviv. <10>	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.			
1-7	4.2 (10)	10/10	4.1 (10)	98	10/10	4.2 (10)	100	10/10	4.2 (10)	100	10/10	4.2 (10)	100	10/10	4.3 (10)	102	10/10
2-7	4.3 (10)	10/10	4.3 (10)	100	10/10	4.4 (10)	102	10/10	4.4 (10)	102	10/10	4.3 (10)	100	10/10	4.4 (10)	102	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		1300 ppm		2000 ppm		3000 ppm		4500 ppm		6700 ppm						
	Av.FC.	No.of Surviv. <10>	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.	Av.FC.	% of cont. <10>	No.of Surviv.
1-7	3.9 (10)	10/10	3.8 (10)	97	10/10	3.7 (10)	95	10/10	3.6 (10)	92	10/10	3.7 (10)	95	10/10	3.7 (10)	95	10/10
2-7	4.0 (10)	10/10	4.0 (10)	100	10/10	3.9 (10)	98	10/10	4.0 (10)	100	10/10	3.9 (10)	98	10/10	4.0 (10)	100	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-Day on Study	Control			3000 ppm			4400 ppm			6700 ppm			10000 ppm			15000 ppm		
	Au.Wt.	No.of Surviv. <10>		Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.
0-0	23.7 (10)	10/10		23.7 (10)	100	10/10	23.7 (10)	100	10/10	23.7 (10)	100	10/10	23.7 (10)	100	9/10	23.7 (10)	100	0/10
1-7	25.1 (10)	10/10		25.0 (10)	100	10/10	24.6 (10)	98	10/10	23.4 (10)	93	10/10	22.1 (2)	88	2/10	- (-)	-	0/10
2-7	25.9 (10)	10/10		25.6 (10)	99	10/10	25.9 (10)	100	10/10	25.1 (10)	97	10/10	- (-)	-	0/10	- (-)	-	0/10
3-7	26.6 (10)	10/10		25.8 (10)	97	10/10	26.4 (10)	99	10/10	25.9 (10)	97	10/10	- (-)	-	0/10	- (-)	-	0/10
4-7	27.5 (10)	10/10		26.0 (10)	95	10/10	26.8 (10)	97	10/10	26.3 (10)	96	10/10	- (-)	-	0/10	- (-)	-	0/10
5-7	28.4 (10)	10/10		27.0 (10)	95	10/10	27.7 (10)	98	10/10	27.2 (10)	96	10/10	- (-)	-	0/10	- (-)	-	0/10
6-7	29.4 (10)	10/10		27.5 (10)	94	10/10	28.2 (10)	96	10/10	27.8 (10)	95	10/10	- (-)	-	0/10	- (-)	-	0/10
7-7	30.1 (10)	10/10		27.7 (10)	92	10/10	28.5 (10)	95	10/10	28.3 (10)	94	10/10	- (-)	-	0/10	- (-)	-	0/10
8-7	30.9 (10)	10/10		28.6 (10)	93	10/10	29.3 (10)	95	10/10	28.9 (10)	94	10/10	- (-)	-	0/10	- (-)	-	0/10
9-7	31.4 (10)	10/10		29.2 (10)	93	10/10	30.0 (10)	96	10/10	29.6 (10)	94	10/10	- (-)	-	0/10	- (-)	-	0/10
10-7	32.4 (10)	10/10		29.9 (10)	92	10/10	30.8 (10)	95	10/10	29.9 (10)	92	10/10	- (-)	-	0/10	- (-)	-	0/10
11-7	33.3 (10)	10/10		30.7 (10)	92	10/10	31.2 (10)	94	10/10	30.4 (10)	91	10/10	- (-)	-	0/10	- (-)	-	0/10
12-7	34.4 (10)	10/10		31.2 (10)	91	10/10	32.2 (10)	94	10/10	31.2 (10)	91	10/10	- (-)	-	0/10	- (-)	-	0/10
13-7	34.9 (10)	10/10		32.2 (10)	92	10/10	32.4 (10)	93	10/10	31.4 (10)	90	10/10	- (-)	-	0/10	- (-)	-	0/10
< >:No.of effective animals,():No.of measured animals Au.Wt.: g																		

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

Week-Day on Study	Control			3000 ppm			4400 ppm			6700 ppm			10000 ppm			15000 ppm		
	Au.Wt.	No.of Surviv. <10>		Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.	Au.Wt.	% of cont. <10>	No.of Surviv.
0-0	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	6/10	19.1 (10)	100	0/10
1-7	20.8 (10)	10/10		20.3 (10)	98	10/10	20.1 (10)	97	10/10	19.7 (9)	95	9/10	- (-)	-	0/10	- (-)	-	0/10
2-7	21.8 (10)	10/10		21.2 (10)	97	10/10	21.5 (10)	99	10/10	21.2 (9)	97	9/10	- (-)	-	0/10	- (-)	-	0/10
3-7	22.0 (10)	10/10		22.1 (10)	100	10/10	22.1 (10)	100	10/10	22.5 (9)	102	9/10	- (-)	-	0/10	- (-)	-	0/10
4-7	22.8 (10)	10/10		22.9 (10)	100	10/10	22.5 (10)	99	10/10	23.4 (9)	103	9/10	- (-)	-	0/10	- (-)	-	0/10
5-7	23.1 (10)	10/10		23.7 (10)	103	10/10	23.3 (10)	101	10/10	24.0 (9)	104	9/10	- (-)	-	0/10	- (-)	-	0/10
6-7	24.4 (10)	10/10		24.4 (10)	100	10/10	23.7 (10)	97	10/10	24.6 (9)	101	9/10	- (-)	-	0/10	- (-)	-	0/10
7-7	24.3 (10)	10/10		24.6 (10)	101	10/10	24.6 (10)	101	10/10	25.0 (9)	103	9/10	- (-)	-	0/10	- (-)	-	0/10
8-7	25.0 (10)	10/10		24.9 (10)	100	10/10	25.0 (10)	100	10/10	25.5 (9)	102	9/10	- (-)	-	0/10	- (-)	-	0/10
9-7	25.4 (10)	10/10		25.2 (10)	99	10/10	25.5 (10)	100	10/10	26.1 (9)	103	9/10	- (-)	-	0/10	- (-)	-	0/10
10-7	25.5 (10)	10/10		25.7 (10)	101	10/10	25.9 (10)	102	10/10	26.5 (9)	104	9/10	- (-)	-	0/10	- (-)	-	0/10
11-7	26.3 (10)	10/10		26.5 (10)	101	10/10	25.9 (10)	98	10/10	27.2 (9)	103	9/10	- (-)	-	0/10	- (-)	-	0/10
12-7	26.4 (10)	10/10		27.0 (10)	102	10/10	26.8 (10)	102	10/10	27.1 (9)	103	9/10	- (-)	-	0/10	- (-)	-	0/10
13-7	26.9 (10)	10/10		26.9 (10)	100	10/10	26.9 (10)	100	10/10	27.4 (9)	102	9/10	- (-)	-	0/10	- (-)	-	0/10
< >:No.of effective animals,():No.of measured animals Au.Wt.: g																		

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

Week-Day on Study	Control		3000 ppm		No.of Surviv.	4400 ppm		No.of Surviv.	6700 ppm		No.of Surviv.	10000 ppm		No.of Surviv.	15000 ppm		No.of Surviv.
	Au.FC.	No.of Surviv. <10>	Au.FC.	% of cont. <10>		Au.FC.	% of cont. <10>		Au.FC.	% of cont. <10>		Au.FC.	% of cont. <10>		Au.FC.	% of cont. <10>	
1-7	4.5 (10)	10/10	4.5 (10)	100	10/10	4.6 (10)	102	10/10	4.1 (10)	91	10/10	4.7 (9)	104	2/10	- (-)	-	0/10
2-7	4.3 (10)	10/10	4.4 (10)	102	10/10	4.5 (10)	105	10/10	4.4 (10)	102	10/10	5.6 (2)	130	0/10	- (-)	-	0/10
3-7	4.4 (10)	10/10	4.4 (10)	100	10/10	4.4 (10)	100	10/10	4.4 (10)	100	10/10	- (-)	-	0/10	- (-)	-	0/10
4-7	4.6 (10)	10/10	4.6 (10)	100	10/10	4.6 (10)	100	10/10	4.5 (10)	98	10/10	- (-)	-	0/10	- (-)	-	0/10
5-7	4.7 (10)	10/10	4.6 (10)	98	10/10	4.7 (10)	100	10/10	4.6 (10)	98	10/10	- (-)	-	0/10	- (-)	-	0/10
6-7	4.8 (10)	10/10	4.9 (10)	102	10/10	4.6 (9)	96	10/10	4.5 (10)	94	10/10	- (-)	-	0/10	- (-)	-	0/10
7-7	4.7 (10)	10/10	4.7 (10)	100	10/10	4.6 (10)	98	10/10	4.4 (10)	94	10/10	- (-)	-	0/10	- (-)	-	0/10
8-7	4.8 (10)	10/10	4.8 (10)	100	10/10	4.7 (10)	98	10/10	4.6 (10)	96	10/10	- (-)	-	0/10	- (-)	-	0/10
9-7	4.9 (10)	10/10	5.2 (10)	106	10/10	5.1 (10)	104	10/10	4.9 (10)	100	10/10	- (-)	-	0/10	- (-)	-	0/10
10-7	5.0 (10)	10/10	5.3 (10)	106	10/10	5.2 (10)	104	10/10	4.9 (10)	98	10/10	- (-)	-	0/10	- (-)	-	0/10
11-7	4.9 (10)	10/10	5.2 (10)	106	10/10	5.1 (10)	104	10/10	4.8 (10)	98	10/10	- (-)	-	0/10	- (-)	-	0/10
12-7	5.0 (10)	10/10	5.2 (10)	104	10/10	5.2 (10)	104	10/10	4.9 (10)	98	10/10	- (-)	-	0/10	- (-)	-	0/10
13-7	4.9 (10)	10/10	5.1 (10)	104	10/10	5.0 (10)	102	10/10	4.7 (10)	96	10/10	- (-)	-	0/10	- (-)	-	0/10
< >:No.of effective animals,():No.of measured animals Au.FC.: g																	

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

Week-Day on Study	Control		3000 ppm		No.of Surviv.	4400 ppm		No.of Surviv.	6700 ppm		No.of Surviv.	10000 ppm		No.of Surviv.	15000 ppm		No.of Surviv.
	Au.FC.	No.of Surviv. <10>	Au.FC.	% of cont. <10>		Au.FC.	% of cont. <10>		Au.FC.	% of cont. <10>		Au.FC.	% of cont. <10>		Au.FC.	% of cont. <10>	
1-7	4.0 (10)	10/10	4.2 (10)	105	10/10	4.1 (10)	103	10/10	3.8 (10)	95	9/10	4.5 (6)	113	0/10	- (-)	-	0/10
2-7	4.1 (10)	10/10	4.0 (10)	98	10/10	4.0 (10)	98	10/10	4.1 (9)	100	9/10	- (-)	-	0/10	- (-)	-	0/10
3-7	4.2 (6)	10/10	4.3 (10)	102	10/10	4.0 (10)	95	10/10	4.2 (9)	100	9/10	- (-)	-	0/10	- (-)	-	0/10
4-7	4.6 (10)	10/10	4.5 (10)	98	10/10	4.3 (10)	93	10/10	4.4 (9)	96	9/10	- (-)	-	0/10	- (-)	-	0/10
5-7	4.7 (10)	10/10	4.6 (10)	98	10/10	4.4 (10)	94	10/10	4.5 (9)	96	9/10	- (-)	-	0/10	- (-)	-	0/10
6-7	4.8 (10)	10/10	4.8 (10)	100	10/10	4.5 (10)	94	10/10	4.5 (9)	94	9/10	- (-)	-	0/10	- (-)	-	0/10
7-7	4.9 (10)	10/10	4.8 (10)	98	10/10	4.6 (10)	94	10/10	4.5 (9)	92	9/10	- (-)	-	0/10	- (-)	-	0/10
8-7	4.9 (10)	10/10	4.9 (10)	100	10/10	4.7 (10)	96	10/10	4.5 (9)	92	9/10	- (-)	-	0/10	- (-)	-	0/10
9-7	5.1 (10)	10/10	5.2 (10)	102	10/10	5.0 (10)	98	10/10	5.0 (9)	98	9/10	- (-)	-	0/10	- (-)	-	0/10
10-7	5.1 (10)	10/10	5.1 (10)	100	10/10	5.2 (10)	102	10/10	5.0 (9)	98	9/10	- (-)	-	0/10	- (-)	-	0/10
11-7	5.0 (10)	10/10	5.0 (10)	100	10/10	4.9 (10)	98	10/10	5.0 (9)	100	9/10	- (-)	-	0/10	- (-)	-	0/10
12-7	4.8 (10)	10/10	5.2 (10)	108	10/10	5.1 (10)	106	10/10	4.9 (9)	102	9/10	- (-)	-	0/10	- (-)	-	0/10
13-7	5.0 (10)	10/10	5.1 (10)	102	10/10	5.0 (10)	100	10/10	4.7 (9)	94	9/10	- (-)	-	0/10	- (-)	-	0/10
< >:No.of effective animals,():No.of measured animals Au.FC.: g																	