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試験(混餌試験)報告書

試験番号：ラット/0242；マウス/0243

TABLES

TABLES

TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS IN THE 2-YEAR FEED STUDIES OF ANTHRACENE

TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 3 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 4 INCIDENCE OF EXTERNAL AND INTERNAL MASS IN CLINICAL OBSERVATION OF MALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 5 INCIDENCE OF EXTERNAL AND INTERNAL MASS IN CLINICAL OBSERVATION OF FEMALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 6 FOOD CONSUMPTION CHANGES OF MALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 7 FOOD CONSUMPTION CHANGES OF FEMALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 8 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF MALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 9 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF FEMALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 10 CAUSE OF DEATH OF RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 11 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 12 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 13 INCIDENCE OF EXTERNAL AND INTERNAL MASS IN CLINICAL OBSERVATION OF MALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 14 INCIDENCE OF EXTERNAL AND INTERNAL MASS IN CLINICAL OBSERVATION OF FEMALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLES (CONTINUED)

TABLE 15 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 16 FOOD CONSUMPTION OF FEMALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 17 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF FEMALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 18 CAUSE OF DEATH OF MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS IN THE 2-YEAR FEEDING STUDIES OF ANTHRACENE

2-year studies
<Method of Administration> Feed <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:BDF_1 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, 8000, 20000, or 50000 ppm <Female> 0, 8000, 20000, or 50000 ppm Mouse---- <Male> 0, 3200, 8000, or 20000 ppm <Female> 0, 8000, 20000, or 50000 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 Available *ad libitum* Animal per Cage Single (stainless steel wire) Animal Room Environment Barrier system Temperature : 24±2℃ Humidity : 55±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

TABLE 1 EXPERIMENTAL DESIGN AND MATERIALS AND METHODS
(Continued) IN THE 2-YEAR FEEDING STUDIES OF ANTHRACENE

2-year studies
<Hematology> Red blood cell (RBC), Hemoglobin, Hematocrit, Mean Corpuscular Volume (MCV), Mean Corpuscular hemoglobin (MCH), Mean Corpuscular hemoglobin concentrate (MCHC), Platelet, White blood cell (WBC), Differential WBC, Reticulocyte <rat only>, Prothrombin time (PT) <rat only>, Activated partial thromboplastin time (APTT) <rat only>.
<Biochemistry> Total protein, Albumin, A/G/ ratio, Total bilirubin, Glucose, Total 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> pH, Protein, Glucose, Ketone body, Bilirubin <rat only>, Occult blood, Urobilinogen.
<Necropsy> Necropsy performed on all animals.
<Organ Weight> Organ weight measurement performed on scheduled sacrificed animals. The following organs were weighed; brain, lung, liver, spleen, heart, kidney, adrenal, testis, ovary.
<Histopathologic Examination> 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, gall bladder <mouse only>, 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, other organs/tissues with gross lesions.

TABLE 2 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Week on Study	Control Av.Wt.	Control No.of Surviv. <50>	8000 ppm Av.Wt.	8000 ppm % of cont. <50>	8000 ppm No.of Surviv.	20000 ppm Av.Wt.	20000 ppm % of cont. <50>	20000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <50>	50000 ppm No.of Surviv.
0	127 (50)	50/50	127 (50)	100	50/50	127 (50)	100	50/50	127 (50)	100	50/50
1	155 (50)	50/50	152 (50)	98	50/50	151 (50)	97	50/50	149 (50)	96	50/50
2	183 (50)	50/50	171 (50)	93	50/50	181 (50)	99	50/50	178 (50)	97	50/50
3	209 (50)	50/50	196 (50)	94	50/50	205 (50)	98	50/50	201 (50)	96	50/50
4	233 (50)	50/50	223 (50)	96	50/50	228 (50)	98	50/50	225 (50)	97	50/50
5	251 (50)	50/50	242 (50)	96	50/50	245 (50)	98	50/50	242 (50)	96	50/50
6	266 (50)	50/50	257 (50)	97	50/50	259 (50)	97	50/50	256 (50)	96	50/50
7	281 (50)	50/50	272 (50)	97	50/50	273 (50)	97	50/50	271 (50)	96	50/50
8	295 (50)	50/50	286 (50)	97	50/50	287 (50)	97	50/50	284 (50)	96	50/50
9	305 (50)	50/50	297 (50)	97	50/50	297 (50)	97	50/50	295 (50)	97	50/50
10	312 (50)	50/50	305 (50)	98	50/50	306 (50)	98	50/50	304 (50)	97	50/50
11	318 (50)	50/50	310 (50)	97	50/50	310 (50)	97	50/50	309 (50)	97	50/50
12	324 (50)	50/50	317 (50)	98	50/50	316 (50)	98	50/50	315 (50)	97	50/50
13	332 (50)	50/50	324 (50)	98	50/50	321 (50)	97	50/50	317 (50)	95	50/50
14	338 (50)	50/50	329 (50)	97	50/50	327 (50)	97	50/50	328 (50)	97	50/50
18	367 (50)	50/50	358 (50)	98	50/50	354 (50)	96	50/50	356 (50)	97	50/50
22	381 (50)	50/50	371 (50)	97	50/50	365 (50)	96	50/50	367 (50)	96	50/50
26	394 (50)	50/50	387 (50)	98	50/50	381 (50)	97	50/50	383 (50)	97	50/50
30	411 (50)	50/50	403 (50)	98	50/50	396 (50)	96	50/50	395 (50)	96	50/50
34	422 (50)	50/50	412 (50)	98	50/50	406 (50)	96	50/50	406 (50)	96	50/50
38	431 (50)	50/50	422 (50)	98	50/50	417 (50)	97	50/50	416 (50)	97	50/50
42	439 (50)	50/50	432 (50)	98	50/50	427 (50)	97	50/50	428 (50)	97	50/50
46	445 (50)	50/50	435 (50)	98	50/50	428 (49)	96	49/50	433 (50)	97	50/50
50	453 (50)	50/50	445 (50)	98	50/50	439 (49)	97	49/50	443 (50)	98	50/50
54	462 (50)	50/50	450 (50)	97	50/50	447 (48)	97	48/50	451 (50)	98	50/50
58	464 (50)	50/50	454 (50)	98	50/50	452 (48)	97	48/50	454 (50)	98	50/50
62	467 (50)	50/50	457 (50)	98	50/50	456 (48)	98	48/50	457 (50)	98	50/50
66	471 (50)	50/50	457 (50)	97	49/50	460 (48)	98	48/50	459 (50)	97	50/50
70	473 (50)	50/50	462 (49)	98	49/50	460 (48)	97	48/50	460 (50)	97	50/50
74	471 (48)	48/50	461 (49)	98	49/50	461 (48)	98	48/50	458 (50)	97	50/50
78	469 (47)	47/50	460 (49)	98	49/50	456 (48)	97	48/50	457 (48)	97	48/50
82	470 (46)	46/50	457 (49)	97	49/50	456 (48)	97	48/50	460 (47)	98	46/50
86	468 (45)	45/50	449 (49)	96	49/50	450 (48)	96	48/50	461 (46)	99	46/50
90	459 (45)	45/50	442 (46)	96	46/50	439 (48)	96	48/50	446 (46)	97	46/50
94	451 (45)	45/50	438 (45)	97	45/50	431 (48)	96	48/50	436 (44)	97	44/50
98	433 (42)	42/50	425 (45)	98	45/50	422 (46)	97	46/50	428 (40)	99	40/50
102	439 (34)	34/50	416 (43)	95	43/50	412 (43)	94	43/50	419 (38)	95	38/50
104	434 (33)	33/50	403 (43)	93	43/50	400 (43)	92	43/50	408 (38)	94	38/50

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

TABLE 3 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Week on Study	Control Av.Wt.	Control No.of Surviv. <50>	8000 ppm Av.Wt.	8000 ppm % of cont. <50>	8000 ppm No.of Surviv.	20000 ppm Av.Wt.	20000 ppm % of cont. <50>	20000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <50>	50000 ppm No.of Surviv.
0	103 (50)	50/50	103 (50)	100	50/50	103 (50)	100	50/50	103 (50)	100	50/50
1	122 (50)	50/50	118 (50)	97	50/50	117 (50)	96	50/50	117 (50)	96	50/50
2	133 (50)	50/50	127 (50)	95	50/50	127 (50)	95	50/50	126 (50)	95	50/50
3	142 (50)	50/50	135 (50)	95	50/50	135 (50)	95	50/50	133 (50)	94	50/50
4	151 (50)	50/50	144 (50)	95	50/50	143 (50)	95	50/50	141 (50)	93	50/50
5	159 (50)	50/50	151 (50)	95	50/50	150 (50)	94	50/50	148 (50)	93	50/50
6	164 (50)	50/50	156 (50)	95	50/50	156 (50)	95	50/50	154 (50)	94	50/50
7	169 (50)	50/50	161 (50)	95	50/50	160 (50)	95	50/50	159 (50)	94	50/50
8	173 (50)	50/50	165 (50)	95	50/50	165 (50)	95	50/50	163 (50)	94	50/50
9	176 (50)	50/50	169 (50)	96	50/50	168 (50)	95	50/50	166 (50)	94	50/50
10	179 (50)	50/50	172 (50)	96	50/50	171 (50)	96	50/50	170 (50)	95	50/50
11	181 (50)	50/50	173 (50)	96	50/50	173 (50)	96	50/50	171 (50)	94	50/50
12	184 (50)	50/50	175 (50)	95	50/50	175 (50)	95	50/50	173 (50)	94	50/50
13	185 (50)	50/50	176 (50)	95	50/50	175 (50)	95	50/50	173 (50)	94	50/50
14	188 (50)	50/50	177 (50)	94	50/50	176 (50)	94	50/50	175 (50)	93	50/50
18	198 (50)	50/50	187 (50)	94	50/50	185 (50)	93	50/50	182 (50)	92	50/50
22	206 (50)	50/50	194 (50)	94	50/50	193 (50)	94	50/50	189 (50)	92	50/50
26	213 (50)	50/50	199 (50)	93	50/50	197 (50)	92	50/50	194 (50)	91	50/50
30	219 (50)	50/50	203 (50)	93	50/50	195 (50)	89	50/50	199 (50)	91	50/50
34	225 (50)	50/50	206 (50)	92	50/50	204 (50)	91	50/50	202 (50)	90	50/50
38	230 (50)	50/50	209 (50)	91	50/50	207 (50)	90	50/50	205 (50)	89	50/50
42	234 (50)	50/50	214 (50)	91	50/50	211 (50)	90	50/50	210 (50)	90	50/50
46	240 (50)	50/50	220 (50)	92	50/50	217 (50)	90	50/50	215 (50)	90	50/50
50	248 (50)	50/50	225 (50)	91	50/50	222 (49)	90	49/50	220 (49)	89	49/50
54	256 (50)	50/50	231 (50)	90	50/50	228 (49)	89	49/50	226 (49)	88	49/50
58	264 (49)	49/50	239 (50)	91	50/50	235 (49)	89	49/50	234 (48)	89	48/50
62	270 (49)	49/50	245 (49)	91	49/50	242 (49)	90	49/50	241 (48)	89	48/50
66	279 (49)	49/50	252 (49)	90	49/50	248 (49)	89	49/50	249 (48)	89	48/50
70	289 (49)	49/50	260 (48)	90	48/50	254 (49)	88	49/50	255 (48)	88	48/50
74	295 (49)	49/50	264 (48)	89	48/50	259 (48)	88	48/50	260 (48)	88	48/50
78	304 (48)	48/50	268 (46)	88	46/50	262 (47)	86	47/50	264 (48)	87	48/50
82	312 (48)	48/50	275 (45)	88	45/50	266 (47)	85	47/50	267 (47)	86	47/50
86	314 (47)	47/50	267 (45)	85	45/50	267 (46)	85	46/50	269 (46)	86	46/50
90	315 (47)	47/50	270 (45)	86	44/50	265 (45)	84	45/50	267 (45)	85	45/50
94	318 (44)	44/50	278 (42)	87	42/50	267 (44)	84	44/50	266 (44)	84	43/50
98	315 (43)	43/50	277 (42)	88	42/50	264 (43)	84	43/50	264 (43)	84	43/50
102	317 (42)	42/50	277 (42)	87	42/50	262 (42)	83	42/50	266 (38)	84	38/50
104	314 (41)	40/50	271 (40)	86	40/50	255 (40)	81	40/50	260 (37)	83	37/50

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

TABLE 4 INCIDENCE OF EXTERNAL AND INTERNAL MASS IN CLINICAL OBSERVATION OF MALE RAT IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Time of mass occurrence (week)		0～13	14～26	27～39	40～52	53～65	66～78	79～91	92～104	0～104
External mass										
	Control	0/50	0/50	0/50	0/50	2/50	5/50	8/47	16/45	19/50(6/17)
	8000ppm	0/50	0/50	0/50	0/50	1/50	2/49	8/49	17/45	18/50(0/ 7)
	20000ppm	0/50	0/50	0/50	1/50	1/49	0/48	4/48	9/48	10/50(2/ 7)
	50000ppm	0/50	0/50	0/50	2/50	4/50	7/50	7/48	12/45	16/50(7/12)
Internal mass										
	Control	0/50	0/50	0/50	0/50	0/50	0/50	0/47	2/45	2/50(2/17)
	8000ppm	0/50	0/50	0/50	0/50	0/50	0/49	0/49	0/45	0/50(0/ 7)
	20000ppm	0/50	0/50	0/50	0/50	0/49	0/48	0/48	0/48	0/50(0/ 7)
	50000ppm	0/50	0/50	0/50	0/50	0/50	0/50	0/48	0/45	0/50(0/12)

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 OF EXTERNAL AND INTERNAL MASS IN CLINICAL OBSERVATION OF FEMALE RAT IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Time of mass occurrence (week)		0～13	14～26	27～39	40～52	53～65	66～78	79～91	92～104	0～104
External mass										
	Control	0/50	0/50	1/50	0/50	0/50	2/49	2/48	10/45	13/50(4/10)
	8000ppm	0/50	0/50	0/50	0/50	0/50	2/49	2/45	3/42	5/50(2/10)
	20000ppm	0/50	0/50	0/50	0/50	0/49	3/49	2/47	5/44	6/50(1/10)
	50000ppm	0/50	0/50	0/50	0/50	1/49	1/48	5/48	10/45	11/50(3/13)
Internal mass										
	Control	0/50	0/50	0/50	0/50	0/50	0/49	0/48	0/45	0/50(0/10)
	8000ppm	0/50	0/50	0/50	0/50	0/50	0/49	0/45	1/42	1/50(0/10)
	20000ppm	0/50	0/50	0/50	0/50	0/49	0/49	0/47	1/44	1/50(0/10)
	50000ppm	0/50	0/50	0/50	0/50	1/49	0/48	0/48	1/45	2/50(2/13)

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 FOOD CONSUMPTION CHANGES OF MALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Week on Study	Control Av.FC.	Control No.of Surviv. <50>	8000 ppm Av.FC.	8000 ppm % of cont. <50>	8000 ppm No.of Surviv.	20000 ppm Av.FC.	20000 ppm % of cont. <50>	20000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <50>	50000 ppm No.of Surviv.
1	13.5 (50)	50/50	12.7 (50)	94	50/50	12.8 (50)	95	50/50	12.6 (50)	93	50/50
2	14.2 (50)	50/50	12.6 (50)	89	50/50	14.6 (50)	103	50/50	14.7 (50)	104	50/50
3	15.1 (50)	50/50	14.6 (50)	97	50/50	15.2 (50)	101	50/50	15.4 (50)	102	50/50
4	16.0 (50)	50/50	15.4 (50)	96	50/50	16.1 (50)	101	50/50	16.3 (50)	102	50/50
5	15.6 (50)	50/50	15.4 (50)	99	50/50	15.9 (50)	102	50/50	16.2 (50)	104	50/50
6	16.1 (50)	50/50	15.8 (50)	98	50/50	16.1 (50)	100	50/50	16.7 (50)	104	50/50
7	16.0 (50)	50/50	15.5 (50)	97	50/50	16.0 (50)	100	50/50	16.5 (50)	103	50/50
8	16.4 (50)	50/50	15.9 (50)	97	50/50	16.6 (50)	101	50/50	17.1 (50)	104	50/50
9	15.9 (50)	50/50	15.4 (50)	97	50/50	15.7 (50)	99	50/50	16.5 (50)	104	50/50
10	15.5 (50)	50/50	15.5 (50)	100	50/50	16.1 (50)	104	50/50	16.5 (50)	106	50/50
11	15.4 (50)	50/50	15.2 (50)	99	50/50	15.7 (50)	102	50/50	16.2 (50)	105	50/50
12	15.4 (50)	50/50	15.2 (50)	99	50/50	15.7 (50)	102	50/50	16.3 (50)	106	50/50
13	15.5 (50)	50/50	15.3 (50)	99	50/50	15.4 (50)	99	50/50	16.2 (50)	105	50/50
14	15.8 (50)	50/50	15.6 (50)	99	50/50	15.7 (50)	99	50/50	16.8 (50)	106	50/50
18	16.1 (50)	50/50	15.9 (50)	99	50/50	16.0 (50)	99	50/50	16.8 (50)	104	50/50
22	15.6 (50)	50/50	15.5 (50)	99	50/50	15.1 (50)	97	50/50	16.3 (50)	104	50/50
26	15.8 (50)	50/50	16.1 (50)	102	50/50	15.8 (50)	100	50/50	17.1 (50)	108	50/50
30	16.0 (50)	50/50	16.0 (50)	100	50/50	15.8 (50)	99	50/50	17.2 (50)	108	50/50
34	16.3 (50)	50/50	16.4 (50)	101	50/50	16.3 (50)	100	50/50	17.6 (50)	108	50/50
38	16.7 (50)	50/50	16.9 (50)	101	50/50	17.0 (49)	102	50/50	17.8 (49)	107	50/50
42	15.9 (49)	50/50	16.5 (50)	104	50/50	16.7 (50)	105	50/50	17.6 (49)	111	50/50
46	16.4 (49)	50/50	16.7 (50)	102	50/50	17.0 (49)	104	49/50	17.6 (49)	107	50/50
50	16.5 (50)	50/50	17.2 (50)	104	50/50	17.0 (49)	103	49/50	18.0 (50)	109	50/50
54	16.5 (50)	50/50	16.9 (50)	102	50/50	17.1 (48)	104	48/50	17.9 (49)	108	50/50
58	16.5 (50)	50/50	17.3 (50)	105	50/50	17.0 (48)	103	48/50	18.2 (50)	110	50/50
62	16.0 (50)	50/50	17.1 (50)	107	50/50	16.9 (48)	106	48/50	17.6 (49)	110	50/50
66	16.1 (50)	50/50	16.7 (48)	104	49/50	17.2 (47)	107	48/50	17.8 (47)	111	50/50
70	16.1 (50)	50/50	17.3 (49)	107	49/50	17.1 (48)	106	48/50	17.8 (49)	111	50/50
74	15.8 (48)	48/50	16.5 (47)	104	49/50	16.5 (48)	104	48/50	17.2 (50)	109	50/50
78	16.6 (47)	47/50	17.5 (47)	105	49/50	17.0 (48)	102	48/50	17.3 (44)	104	48/50
82	16.8 (46)	46/50	17.3 (47)	103	49/50	17.3 (48)	103	48/50	17.9 (45)	107	46/50
86	16.6 (45)	45/50	17.1 (47)	103	49/50	16.6 (47)	100	48/50	17.7 (44)	107	46/50
90	16.5 (45)	45/50	16.8 (43)	102	46/50	16.6 (44)	101	48/50	17.2 (40)	104	46/50
94	16.5 (45)	45/50	17.6 (44)	107	45/50	16.9 (46)	102	48/50	17.1 (43)	104	44/50
98	15.1 (42)	42/50	16.8 (43)	111	45/50	16.3 (43)	108	46/50	16.9 (37)	112	40/50
102	16.1 (34)	34/50	17.1 (43)	106	43/50	17.5 (43)	109	43/50	17.2 (38)	107	38/50
104	16.9 (33)	33/50	16.6 (43)	98	43/50	16.6 (43)	98	43/50	16.7 (38)	99	38/50

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

TABLE 7 FOOD CONSUMPTION CHANGES OF FEMALE RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Week on Study	Control Av.FC.	Control No.of Surviv. <50>	8000 ppm Av.FC.	8000 ppm % of cont. <50>	8000 ppm No.of Surviv.	20000 ppm Av.FC.	20000 ppm % of cont. <50>	20000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <50>	50000 ppm No.of Surviv.
1	11.3 (50)	50/50	10.2 (50)	90	50/50	10.0 (50)	88	50/50	10.0 (50)	88	50/50
2	11.9 (50)	50/50	11.1 (50)	93	50/50	10.9 (50)	92	50/50	11.1 (50)	93	50/50
3	11.9 (50)	50/50	11.1 (50)	93	50/50	11.4 (50)	96	50/50	11.3 (50)	95	50/50
4	12.3 (50)	50/50	11.5 (50)	93	50/50	11.6 (50)	94	50/50	11.7 (50)	95	50/50
5	11.3 (50)	50/50	11.1 (50)	98	50/50	11.5 (50)	102	50/50	11.5 (50)	102	50/50
6	11.1 (50)	50/50	11.0 (50)	99	50/50	11.3 (50)	102	50/50	11.6 (50)	105	50/50
7	10.8 (50)	50/50	10.6 (50)	98	50/50	11.0 (50)	102	50/50	11.2 (50)	104	50/50
8	10.8 (50)	50/50	10.6 (50)	98	50/50	11.1 (50)	103	50/50	11.4 (49)	106	50/50
9	10.8 (50)	50/50	10.5 (50)	97	50/50	10.8 (50)	100	50/50	11.1 (50)	103	50/50
10	10.8 (50)	50/50	10.5 (50)	97	50/50	10.9 (50)	101	50/50	11.1 (50)	103	50/50
11	10.6 (50)	50/50	10.4 (50)	98	50/50	10.9 (50)	103	50/50	11.1 (50)	105	50/50
12	11.0 (50)	50/50	10.3 (50)	94	50/50	10.9 (50)	99	50/50	11.2 (50)	102	50/50
13	10.5 (50)	50/50	10.2 (50)	97	50/50	10.7 (50)	102	50/50	11.0 (50)	105	50/50
14	11.2 (50)	50/50	10.7 (50)	96	50/50	11.0 (49)	98	50/50	11.3 (50)	101	50/50
18	11.2 (50)	50/50	10.6 (50)	95	50/50	10.6 (50)	95	50/50	10.6 (50)	95	50/50
22	11.4 (50)	50/50	10.8 (50)	95	50/50	10.8 (50)	95	50/50	11.1 (49)	97	50/50
26	11.7 (50)	50/50	10.9 (50)	93	50/50	11.2 (50)	96	50/50	11.4 (50)	97	50/50
30	12.1 (50)	50/50	10.9 (50)	90	50/50	9.7 (50)	80	50/50	11.7 (50)	97	50/50
34	12.5 (50)	50/50	11.1 (50)	89	50/50	11.8 (50)	94	50/50	12.4 (50)	99	50/50
38	12.2 (50)	50/50	11.2 (50)	92	50/50	11.6 (49)	95	50/50	12.3 (50)	101	50/50
42	12.7 (50)	50/50	11.7 (50)	92	50/50	12.0 (50)	94	50/50	12.8 (50)	101	50/50
46	12.9 (50)	50/50	11.7 (50)	91	50/50	12.2 (50)	95	50/50	12.7 (50)	98	50/50
50	12.8 (50)	50/50	11.6 (50)	91	50/50	12.4 (49)	97	49/50	12.4 (49)	97	49/50
54	13.0 (50)	50/50	12.4 (50)	95	50/50	12.9 (49)	99	49/50	13.4 (49)	103	49/50
58	13.2 (49)	49/50	12.6 (50)	95	50/50	13.1 (49)	99	49/50	13.4 (48)	102	48/50
62	12.6 (49)	49/50	12.5 (49)	99	49/50	12.9 (49)	102	49/50	13.2 (47)	105	48/50
66	13.3 (49)	49/50	13.2 (49)	99	49/50	13.5 (49)	102	49/50	14.1 (48)	106	48/50
70	13.1 (49)	49/50	12.9 (48)	98	48/50	13.3 (49)	102	49/50	13.7 (48)	105	48/50
74	13.0 (49)	49/50	12.6 (48)	97	48/50	13.3 (48)	102	48/50	13.4 (48)	103	48/50
78	14.0 (48)	48/50	13.4 (46)	96	46/50	13.3 (47)	95	47/50	13.3 (48)	95	48/50
82	13.6 (47)	48/50	13.5 (45)	99	45/50	13.3 (47)	98	47/50	13.6 (47)	100	47/50
86	13.8 (47)	47/50	11.2 (45)	81	45/50	13.0 (46)	94	46/50	13.6 (46)	99	46/50
90	13.0 (47)	47/50	13.3 (44)	102	44/50	13.0 (45)	100	45/50	13.4 (45)	103	45/50
94	13.6 (44)	44/50	13.4 (42)	99	42/50	13.1 (44)	96	44/50	13.3 (43)	98	43/50
98	13.1 (42)	43/50	13.2 (42)	101	42/50	12.7 (43)	97	43/50	13.0 (43)	99	43/50
102	12.9 (41)	42/50	13.0 (42)	101	42/50	12.3 (42)	95	42/50	13.0 (38)	101	38/50
104	13.7 (40)	40/50	12.8 (39)	93	40/50	13.2 (40)	96	40/50	13.3 (37)	97	37/50

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

TABLE 8 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF MALE RAT IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Group Name	Control	8000ppm	20000ppm	50000ppm
SITE : liver				
TUMOR : hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	0/50(0.0)	5/50(10.0)	5/50(10.0)
Adjusted rates(b)	0.0	0.0	11.63	10.53
Terminal rates(c)	0/33(0.0)	0/43(0.0)	5/43(11.6)	4/38(10.5)
Statistical analysis				
Peto test				
Standard method(d)	P=0.1138			
Prevalence method(d)	P=0.0158*			
Combined analysis (d)	P=0.0056**			
Cochran-Amitage test(e)	P=0.0081**			
Fisher Exact test(e)		P=0.5000	P=0.0360*	P=0.0360*
SITE : liver				
TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	4/50(8.0)	9/50(18.0)	9/50(18.0)
Adjusted rates(b)	0.0	9.30	20.93	21.05
Terminal rates(c)	0/33(0.0)	4/43(9.3)	9/43(20.9)	8/38(21.1)
Statistical analysis				
Peto test				
Standard method(d)	P=------			
Prevalence method(d)	P=0.0032**			
Combined analysis (d)	P=------			
Cochran-Amitage test(e)	P=0.0056**			
Fisher Exact test(e)		P=0.0688	P=0.0029**	P=0.0029**
SITE : liver				
TUMOR : hepatocellular carcinoma, hepatocellular adenoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	4/50(8.0)	13/50(26.0)	13/50(26.0)
Adjusted rates(b)	0.0	9.30	30.23	31.58
Terminal rates(c)	0/33(0.0)	4/43(9.3)	13/43(30.2)	12/38(31.6)
Statistical analysis				
Peto test				
Standard method(d)	P=0.1138			
Prevalence method(d)	P=0.0003**			
Combined analysis (d)	P=0.0001**			
Cochran-Amitage test(e)	P=0.0002**			
Fisher Exact test(e)		P=0.0688	P=0.0003**	P=0.0003**

TABLE 8 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF MALE RAT IN THE 2-YEAR FEED STUDY OF ANTHRACENE (CONTINUED)

Group Name	Control	8000ppm	20000ppm	50000ppm
SITE : urinary bladder				
TUMOR : transitional cell carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	1/50(2.0)	4/50(8.0)	3/50(6.0)
Adjusted rates(b)	0.0	2.33	8.33	7.89
Terminal rates(c)	0/33(0.0)	1/43(2.3)	3/43(7.0)	3/38(7.9)
Statistical analysis				
Peto test				
Standard method(d)	P=------			
Prevalence method(d)	P=0.0552			
Combined analysis (d)	P=------			
Cochran-Amitage test(e)	P=0.1193			
Fisher Exact test(e)		P=0.4950	P=0.0688	P=0.1325
SITE : urinary bladder				
TUMOR : transitional cell carcinoma,transitional cell papilloma				
Tumor rate				
Overall rates(a)	0/50(0.0)	1/50(2.0)	6/50(12.0)	3/50(6.0)
Adjusted rates(b)	0.0	2.33	12.50	7.89
Terminal rates(c)	0/33(0.0)	1/43(2.3)	4/43(9.3)	3/38(7.9)
Statistical analysis				
Peto test				
Standard method(d)	P=------			
Prevalence method(d)	P=0.0689			
Combined analysis (d)	P=------			
Cochran-Amitage test(e)	P=0.1563			
Fisher Exact test(e)		P=0.4950	P=0.0190*	P=0.1325
SITE : spleen				
TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	8/50(16.0)	1/50(2.0)	1/50(2.0)	1/50(2.0)
Adjusted rates(b)	10.26	0.0	0.0	2.63
Terminal rates(c)	3/33(9.1)	0/43(0.0)	0/43(0.0)	1/38(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P=0.9857			
Prevalence method(d)	P=0.8720			
Combined analysis (d)	P=0.9924			
Cochran-Amitage test(e)	P=0.0258*			
Fisher Exact test(e)		P=0.0254*	P=0.0254*	P=0.0254*

TABLE 8 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF MALE RAT IN THE 2-YEAR FEED STUDY OF ANTHRACENE (CONTINUED)

Group Name	Control	8000ppm	20000ppm	50000ppm
SITE : preputial/clitoral gland				
TUMOR : adenoma				
Tumor rate				
Overall rates(a)	4/50(8.0)	4/50(8.0)	2/50(4.0)	0/50(0.0)
Adjusted rates(b)	9.09	9.30	4.65	0.0
Terminal rates(c)	3/33(9.1)	4/43(9.3)	2/43(4.7)	0/38(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P=1.0000 ?			
Prevalence method(d)	P=0.9836			
Combined analysis (d)	P=0.9925			
Cochran-Amitage test(e)	P=0.0356*			
Fisher Exact test(e)		P=0.3579	P=0.3574	P=0.0688

(a):Number of tumor-bearing animals/number of animals examined at the site.
(b):Kaplan-Meire estimate tumor incidence at the end of the study after adjusting for intercurrent mortality.
(c):Observed tumor incidence at terminal kill.
(d):Beneth 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-Amitage and Fisher exact test compare directly the overall incidence rates.
?: The conditional probabilities of the largest and smallest possible out comes can not be estimated or this P-value is beyond the estimated P-value.
------:There is no data which should be statistical analysis.
Significant difference; *:$P \leqq 0.05$ **:$P \leqq 0.01$

TABLE 9 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF FEMALE RAT IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Group Name	Control	8000ppm	20000ppm	50000ppm
SITE : urinary bladder				
TUMOR : transitional cell carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	2/50(4.0)	3/50(6.0)	2/50(4.0)
Adjusted rates(b)	0.0	5.00	7.50	5.41
Terminal rates(c)	0/40(0.0)	2/40(5.0)	3/40(7.5)	2/37(5.4)
Statistical analysis				
Peto test				
Standard method(d)	P=------			
Prevalence method(d)	P=0.1871			
Combined analysis (d)	P=------			
Cochran-Amitage test(e)	P=0.4236			
Fisher Exact test(e)		P=0.2574	P=0.1325	P=0.2574
SITE : uterus				
TUMOR : endometrial stromal sarcoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	0/50(0.0)	0/50(0.0)	3/50(6.0)
Adjusted rates(b)	0.0	0.0	0.0	2.63
Terminal rates(c)	0/40(0.0)	0/40(0.0)	0/40(0.0)	0/37(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P=0.0164* ?			
Prevalence method(d)	P=0.1137			
Combined analysis (d)	P=0.0032**?			
Cochran-Amitage test(e)	P=0.0051**			
Fisher Exact test(e)		P=0.5000	P=0.5000	P=0.1325
SITE : mammary gland				
TUMOR : fibroadenoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	2/50(4.0)	3/50(6.0)	9/50(18.0)
Adjusted rates(b)	7.50	5.00	7.50	17.07
Terminal rates(c)	3/40(7.5)	2/40(5.0)	3/40(7.5)	6/37(16.2)
Statistical analysis				
Peto test				
Standard method(d)	P=0.0172* ?			
Prevalence method(d)	P=0.0299*			
Combined analysis (d)	P=0.0057**			
Cochran-Amitage test(e)	P=0.0094**			
Fisher Exact test(e)		P=0.4909	P=0.3392	P=0.0899
SITE : mammary gland				
TUMOR : adenocarcinoma, adenoma, fibroadenoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	4/50(8.0)	5/50(10.0)	10/50(20.0)
Adjusted rates(b)	7.50	7.50	10.00	18.60
Terminal rates(c)	3/40(7.5)	3/40(7.5)	4/40(10.0)	6/37(16.2)
Statistical analysis				
Peto test				
Standard method(d)	P=0.1061			
Prevalence method(d)	P=0.0242*			
Combined analysis (d)	P=0.0098**			
Cochran-Amitage test(e)	P=0.0157*			
Fisher Exact test(e)		P=0.4895	P=0.3790	P=0.0604

TABLE 9 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF FEMALE RAT IN THE 2-YEAR STUDY FEED OF ANTHRACENE (CONTINUED)

Group Name	Control	8000ppm	20000ppm	50000ppm
SITE : mammary gland				
TUMOR : adenoma, fibroadenoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	4/50(8.0)	3/50(6.0)	10/50(20.0)
Adjusted rates(b)	7.50	7.50	7.50	18.60
Terminal rates(c)	3/40(7.5)	3/40(7.5)	3/40(7.5)	6/37(16.2)
Statistical analysis				
Peto test				
Standard method(d)	P=0.0822			
Prevalence method(d)	P=0.0221*			
Combined analysis (d)	P=0.0077**			
Cochran-Amitage test(e)	P=0.0122*			
Fisher Exact test(e)		P=0.4895	P=0.3392	P=0.0604
SITE : kidney				
TUMOR : renal cell adenoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	3/50(6.0)	6/50(12.0)	4/50(8.0)
Adjusted rates(b)	0.0	7.50	14.63	8.89
Terminal rates(c)	0/40(0.0)	3/40(7.5)	5/40(12.5)	3/37(8.1)
Statistical analysis				
Peto test				
Standard method(d)	P=------			
Prevalence method(d)	P=0.0937			
Combined analysis (d)	P=------			
Cochran-Amitage test(e)	P=0.1717			
Fisher Exact test(e)		P=0.1325	P=0.0190*	P=0.0688
SITE : kidney				
TUMOR : renal cell carcinoma, renal cell adenoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	3/50(6.0)	6/50(12.0)	5/50(10.0)
Adjusted rates(b)	0.0	7.50	14.63	9.09
Terminal rates(c)	0/40(0.0)	3/40(7.5)	5/40(12.5)	3/37(8.1)
Statistical analysis				
Peto test				
Standard method(d)	P=0.1225			
Prevalence method(d)	P=0.0899			
Combined analysis (d)	P=0.0441*			
Cochran-Amitage test(e)	P=0.0775			
Fisher Exact test(e)		P=0.1325	P=0.0190*	P=0.0360*

(a):Number of tumor-bearing animals/number of animals examined at the site.
(b):Kaplan-Meire estimate tumor incidence at the end of the study after adjusting for intercurrent mortality.
(c):Observed tumor incidence at terminal kill.
(d):Beneth 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-Amitage and Fisher exact test compare directly the overall incidence rates.
?: The conditional probabilities of the largest and smallest possible out comes can not be estimated or this P-value is beyond the estimated P-value.
------:There is no data which should be statistical analysis.

TABLE 10 CAUSE OF DEATH OF RATS IN THE 2-YEAR FEED STUDY OF ANTHRACENE

	Male				Female			
Group	Control	8000ppm	20000ppm	50000ppm	Control	8000ppm	20000ppm	50000ppm
Number of dead or moribund animals	17	7	7	12	10	10	10	13
No microscopical confirmation	1	0	0	2	0	0	0	0
Cardiovascular lesion	1	0	0	0	0	0	0	0
Hemorrhage	0	0	1	0	0	0	0	0
Digestive system lesion	0	0	0	0	0	1	1	0
Muscloskelet system lesion	0	0	0	0	1	0	0	0
Body cavity lesion	0	0	0	0	0	0	0	1
Chronic nephropathy	0	0	0	0	0	0	1	0
Hydronephrosis	0	0	0	0	1	0	0	0
Tumor death : leukemia	4	1	1	0	3	5	0	3
subcutis	2	0	2	1	0	1	0	0
spleen	0	2	0	0	0	0	0	0
liver	0	0	0	1	0	0	0	0
kidney	0	0	0	0	0	0	0	1
pituitary	7	2	1	2	2	1	4	2
thyroid	0	0	0	0	0	0	1	0
adrenal	0	1	1	0	1	0	0	0
uterus	–	–	–	–	0	0	1	3
mammary gland	0	0	0	0	0	1	1	2
preptual/clitoral gland	2	0	0	0	0	0	0	0
brain	0	0	0	2	0	0	0	1
Zymbal gland	0	0	0	3	0	1	0	0
bone	0	0	1	1	0	0	1	0
mediastinum	0	0	0	0	2	0	0	0
peritoneum	0	1	0	0	0	0	0	0

TABLE 11 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF MALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Week on Study	Control Av.Wt.	Control No.of Surviv. <49>	3200 ppm Av.Wt.	3200 ppm % of cont. <50>	3200 ppm No.of Surviv.	8000 ppm Av.Wt.	8000 ppm % of cont. <50>	8000 ppm No.of Surviv.	20000 ppm Av.Wt.	20000 ppm % of cont. <50>	20000 ppm No.of Surviv.
0	23.2 (49)	50/50	23.1 (50)	100	50/50	23.1 (50)	100	50/50	23.1 (50)	100	50/50
1	24.0 (49)	50/50	23.7 (50)	99	50/50	23.6 (50)	98	50/50	23.4 (50)	98	50/50
2	25.0 (49)	50/50	24.3 (50)	97	50/50	24.2 (50)	97	50/50	23.8 (50)	95	50/50
3	25.9 (49)	50/50	24.9 (50)	96	50/50	24.8 (50)	96	50/50	24.3 (50)	94	50/50
4	26.2 (49)	49/49	25.1 (50)	96	50/50	25.0 (50)	95	50/50	24.7 (50)	94	50/50
5	26.7 (49)	49/49	25.9 (50)	97	50/50	25.9 (50)	97	50/50	25.4 (50)	95	50/50
6	27.3 (49)	49/49	26.3 (50)	96	50/50	26.3 (50)	96	50/50	25.6 (50)	94	50/50
7	27.9 (49)	49/49	27.0 (50)	97	50/50	26.6 (50)	95	50/50	26.2 (50)	94	50/50
8	28.6 (49)	49/49	27.7 (50)	97	50/50	27.3 (50)	95	50/50	26.5 (50)	93	50/50
9	28.4 (49)	49/49	27.6 (50)	97	50/50	27.3 (50)	96	50/50	26.7 (50)	94	50/50
10	29.3 (49)	49/49	28.6 (50)	98	50/50	27.9 (50)	95	50/50	26.8 (50)	91	50/50
11	29.4 (49)	49/49	28.6 (50)	97	50/50	28.0 (50)	95	50/50	27.1 (50)	92	50/50
12	29.8 (49)	49/49	29.1 (50)	98	50/50	28.4 (50)	95	50/50	27.6 (50)	93	50/50
13	30.1 (49)	49/49	29.5 (50)	98	50/50	28.9 (50)	96	50/50	27.9 (50)	93	50/50
14	30.4 (49)	49/49	29.5 (50)	97	50/50	29.2 (50)	96	50/50	28.3 (50)	93	50/50
18	31.4 (49)	49/49	30.6 (50)	97	50/50	30.3 (50)	96	50/50	29.2 (50)	93	50/50
22	32.7 (49)	49/49	31.9 (50)	98	50/50	31.0 (50)	95	50/50	29.8 (50)	91	50/50
26	34.1 (49)	49/49	33.2 (50)	97	50/50	32.5 (50)	95	50/50	31.1 (50)	91	50/50
30	33.7 (49)	49/49	32.6 (50)	97	50/50	31.7 (50)	94	50/50	30.1 (50)	89	50/50
34	34.3 (49)	49/49	34.0 (50)	99	50/50	32.8 (50)	96	50/50	30.8 (50)	90	50/50
38	34.4 (49)	49/49	33.6 (50)	98	50/50	32.9 (50)	96	50/50	31.2 (50)	91	50/50
42	34.5 (49)	49/49	34.0 (50)	99	50/50	33.1 (50)	96	50/50	31.1 (50)	90	50/50
46	34.7 (49)	49/49	34.1 (50)	98	50/50	33.0 (50)	95	50/50	31.5 (50)	91	50/50
50	35.2 (49)	49/49	34.7 (49)	99	49/50	34.1 (49)	97	49/50	32.0 (50)	91	50/50
54	35.1 (48)	48/49	33.7 (48)	96	48/50	33.8 (48)	96	48/50	31.5 (50)	90	50/50
58	35.3 (48)	48/49	34.9 (48)	99	48/50	34.5 (48)	98	48/50	32.5 (50)	92	50/50
62	35.2 (47)	47/49	34.9 (48)	99	48/50	34.0 (48)	97	48/50	31.4 (50)	89	50/50
66	33.0 (47)	47/49	34.1 (48)	103	48/50	33.4 (47)	101	47/50	30.6 (50)	93	50/50
68	33.8 (47)	47/49	34.7 (48)	103	48/50	34.2 (47)	101	47/50	31.7 (50)	94	50/50
70	35.0 (47)	47/49	35.5 (48)	101	48/50	34.8 (47)	99	47/50	32.6 (50)	93	50/50
74	35.7 (46)	46/49	35.3 (48)	99	48/50	35.0 (46)	98	46/50	32.4 (50)	91	50/50
78	36.7 (46)	46/49	35.1 (48)	96	48/50	34.1 (44)	93	44/50	32.6 (49)	89	49/50
82	36.4 (46)	46/49	35.1 (48)	96	48/50	33.5 (43)	92	43/50	32.8 (49)	90	49/50
86	35.4 (46)	46/49	34.5 (45)	97	45/50	32.7 (42)	92	42/50	32.2 (49)	91	49/50
90	35.0 (45)	45/49	33.8 (42)	97	42/50	33.1 (41)	95	41/50	32.1 (49)	92	49/50
94	35.2 (45)	45/49	33.4 (42)	95	42/50	32.5 (41)	92	41/50	31.7 (46)	90	46/50
98	35.8 (45)	45/49	34.0 (42)	95	42/50	33.6 (40)	94	40/50	32.4 (44)	91	44/50
102	35.3 (43)	43/49	33.6 (41)	95	41/50	33.4 (38)	95	38/50	32.3 (42)	92	42/50
104	34.4 (41)	41/49	33.3 (41)	97	41/50	33.0 (37)	96	37/50	32.0 (42)	93	42/50

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

TABLE 12 SURVIVAL ANIMAL NUMBERS AND BODY WEIGHT CHANGES OF FEMALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Week on Study	Control Av.Wt.	Control No.of Surviv. <50>	8000 ppm Av.Wt.	8000 ppm % of cont. <50>	8000 ppm No.of Surviv.	20000 ppm Av.Wt.	20000 ppm % of cont. <50>	20000 ppm No.of Surviv.	50000 ppm Av.Wt.	50000 ppm % of cont. <50>	50000 ppm No.of Surviv.
0	18.6 (50)	50/50	18.6 (50)	100	50/50	18.6 (50)	100	50/50	18.6 (50)	100	50/50
1	19.2 (50)	50/50	18.8 (50)	98	50/50	18.5 (50)	96	50/50	18.3 (50)	95	50/50
2	19.9 (50)	50/50	19.4 (50)	97	50/50	19.0 (50)	95	50/50	18.8 (50)	94	50/50
3	20.6 (50)	50/50	19.8 (50)	96	50/50	19.5 (50)	95	50/50	19.0 (50)	92	50/50
4	21.1 (50)	50/50	20.6 (50)	98	50/50	20.1 (50)	95	50/50	20.0 (50)	95	50/50
5	21.8 (50)	50/50	20.8 (50)	95	50/50	20.6 (50)	94	50/50	20.0 (50)	92	50/50
6	22.1 (50)	50/50	21.4 (50)	97	50/50	20.9 (50)	95	50/50	20.6 (50)	93	50/50
7	22.5 (50)	50/50	21.6 (50)	96	50/50	21.1 (50)	94	50/50	20.6 (50)	92	50/50
8	22.8 (50)	50/50	22.1 (50)	97	50/50	21.7 (50)	95	50/50	21.4 (50)	94	50/50
9	23.0 (50)	50/50	22.4 (50)	97	50/50	21.6 (50)	94	50/50	21.3 (50)	93	50/50
10	23.4 (50)	50/50	22.5 (50)	96	50/50	21.9 (50)	94	50/50	21.9 (50)	94	50/50
11	23.2 (50)	50/50	22.4 (50)	97	50/50	22.2 (50)	96	50/50	21.6 (50)	93	50/50
12	23.8 (50)	50/50	23.1 (50)	97	50/50	22.5 (50)	95	50/50	22.3 (50)	94	50/50
13	23.6 (50)	50/50	23.1 (50)	98	50/50	22.9 (50)	97	50/50	22.5 (50)	95	50/50
14	24.1 (50)	50/50	23.6 (50)	98	50/50	23.1 (50)	96	50/50	22.5 (50)	93	50/50
18	25.3 (50)	50/50	24.4 (50)	96	50/50	23.8 (50)	94	50/50	23.2 (50)	92	50/50
22	25.5 (50)	50/50	24.7 (50)	97	50/50	24.2 (50)	95	50/50	23.2 (50)	91	50/50
26	27.5 (50)	50/50	26.2 (50)	95	50/50	25.3 (50)	92	50/50	24.6 (50)	89	50/50
30	27.4 (50)	50/50	26.5 (50)	97	50/50	25.5 (49)	93	49/50	24.6 (50)	90	50/50
34	27.7 (50)	50/50	27.3 (50)	99	50/50	26.0 (49)	94	49/50	25.0 (50)	90	50/50
38	27.8 (50)	50/50	27.2 (50)	98	50/50	26.3 (49)	95	49/50	25.3 (50)	91	50/50
42	28.8 (50)	50/50	27.8 (50)	97	50/50	26.7 (49)	93	49/50	25.8 (50)	90	50/50
46	28.7 (50)	50/50	27.9 (50)	97	50/50	26.9 (49)	94	49/50	25.8 (50)	90	50/50
50	28.9 (50)	50/50	28.0 (50)	97	50/50	27.4 (49)	95	49/50	26.2 (50)	91	50/50
54	29.5 (49)	49/50	28.4 (50)	96	50/50	28.0 (49)	95	49/50	26.4 (50)	89	50/50
58	29.5 (49)	49/50	28.5 (50)	97	50/50	27.9 (49)	95	49/50	26.3 (50)	89	50/50
62	29.2 (49)	49/50	28.5 (50)	98	50/50	27.9 (49)	96	49/50	26.4 (49)	90	49/50
66	28.1 (49)	49/50	28.6 (49)	102	49/50	27.7 (49)	99	49/50	25.5 (49)	91	49/50
68	28.9 (48)	48/50	29.1 (49)	101	49/50	28.6 (49)	99	49/50	27.0 (49)	93	49/50
70	28.2 (48)	48/50	28.2 (49)	100	49/50	27.7 (49)	98	49/50	26.2 (48)	93	48/50
74	29.2 (47)	47/50	28.5 (48)	98	48/50	28.0 (48)	96	48/50	27.0 (48)	92	48/50
78	30.0 (46)	46/50	29.3 (48)	98	48/50	28.9 (47)	96	47/50	27.2 (46)	91	46/50
82	29.6 (46)	45/50	29.2 (46)	99	46/50	28.6 (46)	97	46/50	27.0 (45)	91	45/50
86	28.8 (42)	42/50	28.4 (43)	99	43/50	28.1 (44)	98	44/50	26.1 (44)	91	44/50
90	29.6 (40)	40/50	29.1 (39)	98	39/50	28.6 (43)	97	43/50	26.8 (41)	91	41/50
94	29.2 (38)	38/50	28.7 (34)	98	34/50	28.4 (43)	97	43/50	26.7 (38)	91	38/50
98	29.0 (37)	37/50	29.1 (33)	100	33/50	28.8 (41)	99	41/50	26.9 (37)	93	37/50
102	29.2 (35)	35/50	28.9 (32)	99	32/50	28.2 (38)	97	38/50	26.5 (34)	91	34/50
104	28.2 (35)	35/50	27.9 (31)	99	31/50	27.7 (34)	98	34/50	25.7 (34)	91	34/50

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

TABLE 13 INCIDENCE OF EXTERNAL AND INTERNAL MASS IN CLINICAL OBSERVATION OF MALE MOUSE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Time of mass occurrence (week)		0～13	14～26	27～39	40～52	53～65	66～78	79～91	92～104	0～104
External mass										
	Control	0/49	0/49	0/49	0/49	0/48	1/47	1/46	2/45	2/49 (0/ 8)
	3200ppm	0/50	0/50	0/50	0/50	0/48	1/48	2/48	2/42	2/50 (0/ 9)
	8000ppm	0/50	0/50	0/50	0/50	0/49	0/47	1/44	1/41	3/50 (2/13)
	20000ppm	0/50	0/50	0/50	0/50	0/50	1/50	2/49	1/47	3/50 (1/ 8)
Internal mass										
	Control	0/49	0/49	0/49	0/49	0/48	0/47	0/46	0/45	0/49 (0/ 8)
	3200ppm	0/50	0/50	1/50	1/50	1/48	1/48	2/48	1/42	4/50 (3/ 9)
	8000ppm	0/50	0/50	0/50	0/50	0/49	1/47	1/44	2/41	3/50 (2/13)
	20000ppm	0/50	0/50	0/50	0/50	0/50	1/50	2/49	1/47	3/50 (2/ 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 14 INCIDENCE OF EXTERNAL AND INTERNAL MASS IN CLINICAL OBSERVATION OF FEMALE MOUSE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Time of mass occurrence (week)		0～13	14～26	27～39	40～52	53～65	66～78	79～91	92～104	0～104
External mass										
	Control	0/50	0/50	0/50	0/50	0/50	1/49	0/46	3/39	4/50 (1/15)
	8000ppm	0/50	0/50	0/50	0/50	1/50	2/49	2/47	3/38	4/50 (1/19)
	20000ppm	0/50	0/50	0/50	0/49	0/49	0/49	1/46	3/43	4/50 (1/16)
	50000ppm	0/50	0/50	0/50	0/50	1/50	0/49	1/45	3/39	5/50 (4/16)
Internal mass										
	Control	0/50	0/50	0/50	0/50	1/50	2/49	4/46	3/39	2/50 (0/15)
	8000ppm	0/50	0/50	0/50	0/50	1/50	2/49	6/47	5/38	7/50 (3/19)
	20000ppm	0/50	0/50	0/50	0/49	2/49	3/49	3/46	5/43	6/50 (2/16)
	50000ppm	0/50	0/50	1/50	1/50	2/50	2/49	2/45	4/39	6/50 (2/16)

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 15 FOOD CONSUMPTION CHANGES OF MALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Week on Study	Control Av.FC.	Control No.of Surviv. <49>	3200 ppm Av.FC.	3200 ppm % of cont. <50>	3200 ppm No.of Surviv.	8000 ppm Av.FC.	8000 ppm % of cont. <50>	8000 ppm No.of Surviv.	20000 ppm Av.FC.	20000 ppm % of cont. <50>	20000 ppm No.of Surviv.
1	4.5 (49)	50/50	4.2 (50)	93	50/50	4.4 (50)	98	50/50	4.3 (50)	96	50/50
2	4.4 (49)	50/50	4.0 (50)	91	50/50	4.0 (50)	91	50/50	4.1 (50)	93	50/50
3	4.4 (49)	50/50	4.2 (50)	95	50/50	4.3 (50)	98	50/50	4.3 (50)	98	50/50
4	4.3 (49)	49/49	4.0 (50)	93	50/50	4.0 (50)	93	50/50	4.3 (50)	100	50/50
5	4.2 (49)	49/49	4.2 (50)	100	50/50	4.1 (50)	98	50/50	4.3 (50)	102	50/50
6	4.1 (49)	49/49	4.0 (50)	98	50/50	4.1 (50)	100	50/50	4.1 (50)	100	50/50
7	4.1 (49)	49/49	4.4 (50)	107	50/50	4.2 (50)	102	50/50	4.3 (50)	105	50/50
8	4.6 (49)	49/49	4.5 (50)	98	50/50	4.3 (50)	93	50/50	4.6 (50)	100	50/50
9	4.3 (49)	49/49	4.1 (50)	95	50/50	4.1 (50)	95	50/50	4.3 (50)	100	50/50
10	4.6 (49)	49/49	4.8 (50)	104	50/50	4.7 (50)	102	50/50	4.8 (50)	104	50/50
11	4.3 (49)	49/49	4.4 (50)	102	50/50	4.3 (50)	100	50/50	4.5 (50)	105	50/50
12	4.1 (49)	49/49	4.0 (50)	98	50/50	4.3 (50)	105	50/50	4.2 (50)	102	50/50
13	4.6 (49)	49/49	4.6 (49)	100	50/50	4.6 (50)	100	50/50	4.7 (50)	102	50/50
14	4.4 (49)	49/49	4.1 (50)	93	50/50	4.5 (50)	102	50/50	4.5 (50)	102	50/50
18	4.6 (49)	49/49	4.6 (50)	100	50/50	4.5 (50)	98	50/50	4.4 (50)	96	50/50
22	4.6 (49)	49/49	4.6 (50)	100	50/50	4.4 (50)	96	50/50	4.6 (50)	100	50/50
26	4.5 (49)	49/49	4.6 (50)	102	50/50	4.6 (50)	102	50/50	4.6 (50)	102	50/50
30	4.8 (49)	49/49	4.9 (50)	102	50/50	4.9 (50)	102	50/50	4.8 (50)	100	50/50
34	4.6 (49)	49/49	4.7 (50)	102	50/50	4.8 (50)	104	50/50	4.7 (50)	102	50/50
38	4.2 (49)	49/49	4.2 (50)	100	50/50	4.5 (50)	107	50/50	4.5 (50)	107	50/50
42	5.1 (49)	49/49	5.1 (50)	100	50/50	4.9 (50)	96	50/50	5.0 (50)	98	50/50
46	4.6 (49)	49/49	4.5 (50)	98	50/50	4.4 (50)	96	50/50	4.5 (50)	98	50/50
50	4.5 (49)	49/49	4.7 (49)	104	49/50	4.5 (49)	100	49/50	4.6 (50)	102	50/50
54	4.4 (48)	48/49	4.3 (47)	98	48/50	4.3 (48)	98	48/50	4.2 (49)	95	50/50
58	4.1 (48)	48/49	4.7 (48)	115	48/50	4.9 (48)	120	48/50	4.8 (50)	117	50/50
62	4.3 (48)	47/49	4.4 (48)	102	48/50	4.3 (48)	100	48/50	4.3 (50)	100	50/50
66	2.9 (47)	47/49	3.2 (48)	110	48/50	3.4 (47)	117	47/50	3.2 (50)	110	50/50
68	4.3 (47)	47/49	4.7 (48)	109	48/50	4.7 (47)	109	47/50	4.7 (50)	109	50/50
70	4.4 (47)	47/49	4.8 (48)	109	48/50	4.9 (47)	111	47/50	4.7 (50)	107	50/50
74	4.3 (46)	46/49	4.0 (48)	93	48/50	4.1 (46)	95	46/50	4.3 (50)	100	50/50
78	4.7 (46)	46/49	4.4 (48)	94	48/50	4.3 (44)	91	44/50	4.6 (49)	98	49/50
82	4.9 (46)	46/49	4.5 (48)	92	48/50	4.6 (43)	94	43/50	4.7 (49)	96	49/50
86	4.4 (46)	46/49	4.4 (45)	100	45/50	4.3 (43)	98	42/50	4.4 (49)	100	49/50
90	4.9 (45)	45/49	4.9 (42)	100	42/50	5.0 (41)	102	41/50	4.8 (49)	98	49/50
94	4.8 (45)	45/49	4.5 (42)	94	42/50	4.7 (41)	98	41/50	4.7 (46)	98	46/50
98	4.6 (45)	45/49	4.7 (42)	102	42/50	4.7 (40)	102	40/50	4.7 (44)	102	44/50
102	4.4 (43)	43/49	4.5 (41)	102	41/50	4.5 (38)	102	38/50	4.6 (42)	105	42/50
104	4.7 (41)	41/49	4.4 (41)	94	41/50	4.5 (37)	96	37/50	4.4 (42)	94	42/50

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

TABLE 16 FOOD CONSUMPTION CHANGES OF FEMALE MICE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Week on Study	Control Av.FC.	Control No.of Surviv. <50>	8000 ppm Av.FC.	8000 ppm % of cont. <50>	8000 ppm No.of Surviv.	20000 ppm Av.FC.	20000 ppm % of cont. <50>	20000 ppm No.of Surviv.	50000 ppm Av.FC.	50000 ppm % of cont. <50>	50000 ppm No.of Surviv.
1	4.3 (50)	50/50	4.2 (50)	98	50/50	4.1 (50)	95	50/50	4.2 (50)	98	50/50
2	4.3 (50)	50/50	4.1 (50)	95	50/50	3.9 (50)	91	50/50	3.9 (50)	91	50/50
3	4.2 (50)	50/50	4.0 (50)	95	50/50	3.9 (50)	93	50/50	3.8 (50)	90	50/50
4	4.4 (50)	50/50	4.2 (50)	95	50/50	3.9 (50)	89	50/50	4.0 (50)	91	50/50
5	4.1 (50)	50/50	4.1 (50)	100	50/50	4.1 (50)	100	50/50	4.1 (50)	100	50/50
6	4.4 (50)	50/50	4.4 (50)	100	50/50	4.1 (47)	93	50/50	4.2 (50)	95	50/50
7	4.2 (50)	50/50	4.3 (50)	102	50/50	4.3 (50)	102	50/50	4.4 (50)	105	50/50
8	4.4 (50)	50/50	4.4 (50)	100	50/50	4.6 (49)	105	50/50	4.3 (50)	98	50/50
9	4.6 (50)	50/50	4.4 (50)	96	50/50	4.4 (50)	96	50/50	4.4 (50)	96	50/50
10	4.8 (50)	50/50	4.5 (50)	94	50/50	4.5 (50)	94	50/50	4.4 (50)	92	50/50
11	4.6 (50)	50/50	4.7 (50)	102	50/50	4.7 (50)	102	50/50	4.6 (50)	100	50/50
12	4.6 (50)	50/50	4.5 (50)	98	50/50	4.5 (50)	98	50/50	4.5 (50)	98	50/50
13	4.6 (50)	50/50	4.6 (50)	100	50/50	4.6 (50)	100	50/50	4.7 (50)	102	50/50
14	4.4 (50)	50/50	4.5 (50)	102	50/50	4.6 (50)	105	50/50	4.6 (50)	105	50/50
18	4.5 (50)	50/50	4.6 (50)	102	50/50	4.6 (50)	102	50/50	4.6 (50)	102	50/50
22	4.5 (50)	50/50	4.6 (50)	102	50/50	4.5 (50)	100	50/50	4.7 (50)	104	50/50
26	4.8 (50)	50/50	4.7 (50)	98	50/50	4.9 (50)	102	50/50	4.9 (50)	102	50/50
30	4.8 (49)	50/50	4.7 (50)	98	50/50	4.7 (49)	98	49/50	4.7 (50)	98	50/50
34	4.8 (50)	50/50	4.8 (50)	100	50/50	4.7 (49)	98	49/50	4.9 (50)	102	50/50
38	4.4 (50)	50/50	4.5 (50)	102	50/50	4.5 (49)	102	49/50	4.4 (50)	100	50/50
42	4.7 (50)	50/50	4.7 (50)	100	50/50	4.9 (49)	104	49/50	4.8 (50)	102	50/50
46	4.6 (50)	50/50	4.9 (50)	107	50/50	4.9 (49)	107	49/50	5.0 (50)	109	50/50
50	4.7 (50)	50/50	4.9 (50)	104	50/50	4.8 (49)	102	49/50	4.8 (50)	102	50/50
54	4.6 (49)	49/50	4.6 (50)	100	50/50	4.6 (48)	100	49/50	4.5 (50)	98	50/50
58	4.4 (49)	49/50	5.1 (50)	116	50/50	4.8 (49)	109	49/50	4.8 (50)	109	50/50
62	4.6 (49)	49/50	4.7 (50)	102	50/50	4.7 (49)	102	49/50	4.6 (49)	100	49/50
66	3.0 (49)	49/50	3.7 (49)	123	49/50	3.6 (49)	120	49/50	3.7 (48)	123	49/50
68	4.6 (48)	48/50	5.2 (49)	113	49/50	5.0 (49)	109	49/50	5.1 (49)	111	49/50
70	3.9 (48)	48/50	4.5 (49)	115	49/50	4.6 (49)	118	49/50	4.6 (48)	118	48/50
74	5.0 (47)	47/50	4.9 (47)	98	48/50	4.9 (48)	98	48/50	5.1 (48)	102	48/50
78	5.5 (46)	46/50	5.2 (48)	95	48/50	5.7 (47)	104	47/50	5.6 (46)	102	46/50
82	4.9 (46)	45/50	5.0 (46)	102	46/50	5.0 (46)	102	46/50	5.1 (45)	104	45/50
86	4.4 (42)	42/50	4.4 (43)	100	43/50	4.5 (44)	102	44/50	4.6 (44)	105	44/50
90	4.7 (40)	40/50	4.5 (39)	96	39/50	4.6 (43)	98	43/50	4.6 (41)	98	41/50
94	4.6 (38)	38/50	4.5 (34)	98	34/50	4.6 (43)	100	43/50	4.8 (38)	104	38/50
98	4.6 (37)	37/50	4.7 (33)	102	33/50	4.8 (41)	104	41/50	4.9 (37)	107	37/50
102	4.9 (35)	35/50	4.8 (32)	98	32/50	4.9 (38)	100	38/50	5.3 (34)	108	34/50
104	4.4 (35)	35/50	4.3 (31)	98	31/50	4.3 (34)	98	34/50	4.6 (34)	105	34/50

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

TABLE 17 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF FEMALE MOUSE IN THE 2-YEAR FEED STUDY OF ANTHRACENE

Group Name	Control	8000ppm	20000ppm	50000ppm
SITE : liver				
TUMOR : hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	2/50(4.0)	5/50(10.0)	12/50(24.0)
Adjusted rates(b)	0.0	6.45	8.82	29.41
Terminal rates(c)	0/35(0.0)	2/31(6.5)	3/34(8.8)	10/34(29.4)
Statistical analysis				
Peto test				
Standard method(d)	P=0.1852			
Prevalence method(d)	P<0.0001**			
Combined analysis (d)	P<0.0001**			
Cochran-Amitage test(e)	P<0.0001**			
Fisher Exact test(e)		P=0.2574	P=0.0360*	P=0.0005**
SITE : liver				
TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	2/50(4.0)	3/50(6.0)	6/50(12.0)	20/50(40.0)
Adjusted rates(b)	5.71	9.68	15.79	58.82
Terminal rates(c)	2/35(5.7)	3/31(9.7)	5/34(14.7)	20/34(58.8)
Statistical analysis				
Peto test				
Standard method(d)	P=------			
Prevalence method(d)	P<0.0001**			
Combined analysis (d)	P=------			
Cochran-Amitage test(e)	P<0.0001**			
Fisher Exact test(e)		P=0.4909	P=0.1606	P=0.0003**
SITE : liver				
TUMOR : hepatocellular carcinoma, hepatocellular adenoma				
Tumor rate				
Overall rates(a)	2/50(4.0)	5/50(10.0)	11/50(22.0)	26/50(52.0)
Adjusted rates(b)	5.71	16.13	25.00	70.59
Terminal rates(c)	2/35(5.7)	5/31(16.1)	8/34(23.5)	24/34(70.6)
Statistical analysis				
Peto test				
Standard method(d)	P=0.1852			
Prevalence method(d)	P<0.0001**?			
Combined analysis (d)	P<0.0001**?			
Cochran-Amitage test(e)	P<0.0001**			
Fisher Exact test(e)		P=0.2425	P=0.0170*	P=0.0001**
SITE : all site				
TUMOR : histiocytic sarcoma				
Tumor rate				
Overall rates(a)	6/50(12.0)	18/50(36.0)	11/50(22.0)	11/50(22.0)
Adjusted rates(b)	2.86	25.81	7.69	14.63
Terminal rates(c)	1/35(2.9)	8/31(25.8)	2/34(5.9)	4/34(11.8)
Statistical analysis				
Peto test				
Standard method(d)	P=0.6823			
Prevalence method(d)	P=0.2553			
Combined analysis (d)	P=0.4854			
Cochran-Amitage test(e)	P=0.8805			
Fisher Exact test(e)		P=0.0222*	P=0.1955	P=0.1955

TABLE 17 NEOPLASTIC LESIONS INCIDENCE AND STATISTICAL ANALYSIS OF FEMALE MOUSE IN THE 2-YEAR FEED STUDY OF ANTHRACENE (CONTINUED)

Group Name	Control	8000ppm	20000ppm	50000ppm
SITE : all site				
TUMOR : malignant lymphoma				
Tumor rate				
Overall rates(a)	15/50(30.0)	14/50(28.0)	11/50(22.0)	7/50(14.0)
Adjusted rates(b)	31.43	19.35	17.65	5.88
Terminal rates(c)	11/35(31.4)	6/31(19.4)	6/34(17.6)	2/34(5.9)
Statistical analysis				
Peto test				
Standard method(d)	P=0.5762			
Prevalence method(d)	P=0.9965			
Combined analysis (d)	P=0.9770			
Cochran-Amitage test(e)	P=0.0.95*			
Fisher Exact test(e)		P=0.4810	P=0.3167	P=0.0941

(a):Number of tumor-bearing animals/number of animals examined at the site.
(b):Kaplan-Meire estimate tumor incidence at the end of the study after adjusting for intercurrent mortality.
(c):Observed tumor incidence at terminal kill.
(d):Beneth 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-Amitage and Fisher exact test compare directly the overall incidence rates.
?: The conditional probabilities of the largest and smallest possible out comes can not be estimated or this P-value is beyond the estimated P-value.
------:There is no data which should be statistical analysis.
Significant difference; *:P≦0.05 **:P≦0.01

TABLE 18 CAUSE OF DEATH OF MICE IN TH 2-YEAR FEED STUDY OF ANTHRACENE

		Male				Female			
Group		Control	3200ppm	8000ppm	20000ppm	Control	8000ppm	20000ppm	50000ppm
Number of dead or moribund animals		8	9	13	8	15	19	16	16
No microscopical confirmation		3	0	5	0	1	0	0	0
Integmentary system lesion		0	1	0	0	0	0	0	0
Digestive system lesion		1	0	0	1	1	0	0	0
Urinary retention		2	0	0	0	1	0	0	0
Arteritis		0	0	0	0	0	0	0	1
Hydronephrosis		0	2	1	0	0	0	0	2
Tumor death	leukemia	0	2	1	1	4	8	5	4
	subcutis	0	0	1	0	0	1	0	0
	lung	0	0	1	0	0	1	0	1
	oral cavity	0	0	0	0	1	0	0	0
	liver	2	4	4	3	1	3	5	4
	gall bladder	0	0	0	0	0	0	1	0
	thyroid	0	0	0	0	0	1	0	1
	kidney	0	0	0	1	0	0	0	0
	urinary bladder	0	0	0	1	0	0	0	0
	epididymis	0	0	0	1	–	–	–	–
	uterus	–	–	–	–	5	5	5	2
	muscle	0	0	0	0	0	0	0	1
	bone	0	0	0	0	1	0	0	0