

AR226-2824

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SPONSOR: E.I. duPont de Nemours and Company

MATERIAL: [REDACTED]

SUBJECT: Ninety-Day Feeding Study in the Rat.



Francis X. Wazeter, Ph.D.
Director of Research
International Research and
Development Corporation

Collaborators:

R. H. Buller, Ph.D., Director of Pharmacology
R. G. Geil, D.V.M., Director of Pathology

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Page 1

I. SYNOPSIS

In a 90-day feeding study, male and female albino rats were fed diets containing [REDACTED] at levels of 100, 500 or 2500 ppm. After 35 days of continuous feeding, the 500 and 2500 ppm. dietary levels were increased to 1000 and 5000 ppm., respectively for the remainder of the study. After the prescribed 90-day period of compound administration, representative animals were placed on a withdrawal study.

All rats appeared essentially normal with respect to behavior and appearance throughout the study.

No adverse effect on body weight gain was found at any dietary level employed in this study, both in the active compound administration phase and in the withdrawal period.

Average total weekly food consumption measured in grams/rat/week in those groups fed 100 and 500 - 1000 ppm. of [REDACTED] in the diet compared favorably with the control rats throughout the study. At the 2500 - 5000 ppm. dietary level, food consumption of the male rats ranged from 1.1 to 8.7 per cent less than control male rats, and food consumption of the female rats ranged from 5.2 to 16.4 per cent less than the female control rats. These differences were first noted in the 8th week for males and in the 4th week for females and continued throughout the treatment period.

No meaningful differences in food consumption were reflected by the treated groups of rats in comparison to the control group on the basis of grams of food consumed per day per kilogram of body weight.

No compound-related hematologic or biochemical changes were found

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Page 2

at the 100 and 500 - 1000 ppm. dietary levels of [REDACTED] However, slightly decreased values for erythrocyte counts, hematocrits and hemoglobin concentrations were found for males and females at the 2500 - 5000 ppm. level, particularly at the terminal (90-day) clinicopathology examination. Urinalyses were normal at all times.

Compound-related changes observed at the 90-day necropsy examination consisted of increased liver and kidney weight at the 1000 and 5000 ppm. dosage levels and pale yellowish livers in some male rats from the 500 - 1000 and 2500 - 5000 ppm. dosage levels. In histologic section, only livers from the 2500 - 5000 ppm. dosage level showed any change and this consisted of a slight hypertrophy of centrolobular hepatocytes. The increase in liver and kidney weights and centrolobular hepatocyte hypertrophy persisted with diminished magnitude through 21 days of compound withdrawal. Similar organ weight and histologic changes were observed at the 30 and 60-day interim sacrifices.

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Page 3

II. COMPOUND

The test compound was received from E. I. duPont de Nemours and Company, Wilmington, Delaware, on June 19, 1965. It was a brown amorphous solid in containers bearing the label [REDACTED]
[REDACTED] Haskell No. 4212."

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Page 4

III. CLINICAL STUDIES:

A. METHODS:

1. General Procedure:

Eighty male (weighing from 45 to 64 grams) and eighty female (weighing from 47 to 63 grams) albino rats of the Charles River strain were used for this study.

The rats were housed individually in cages suspended above the droppings in an air-conditioned room throughout the study and were fed a diet of Purina Laboratory Chow for rats ad libitum. Water also was available at all times.

The animals were divided into one control group and three treated groups of 20 male and 20 female rats each.

The rats in each sex group were selected so that the average body weight of each group was similar to that of the other groups of the same sex.

2. Compound Administration:

[REDACTED] was incorporated into the standard powdered laboratory diet of Purina Laboratory Chow and offered to the treated groups of rats ad libitum. The test diet was freshly prepared each week and the compound-in-diet levels mixed so that the rats received [REDACTED] at dietary levels of 100, 500, or 2500 ppm. In the sixth week of compound administration those groups receiving 500 or 2500 ppm. were increased in concentration to dietary levels of 1000 or 5000 ppm., respectively. Those animals receiving 100 ppm. of [REDACTED] in the diet continued to receive this level throughout the 13-week study period.

The control groups of rats received the powdered diet of Purina Laboratory Chow, but without [REDACTED]

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Page 5

Following 13 weeks of compound administration rats in all groups were sacrificed and subjected to necropsy examination with the exception of certain selected animals from the control group and from the treated groups at the 1000 and 5000 ppm. dietary levels which were continued on study in a compound withdrawal phase. The withdrawal phase of this study will be reported in its entirety in a subsequent and separate report.

3. Observations:

The control and test animals were observed daily for mortality, alteration in general appearance and behavior, and signs of pharmacodynamic and/or toxic effects.

Body weights, food consumption, and food efficiency values were recorded for each rat weekly throughout the study.

4. Laboratory Tests:

a. Hematology:

Hematologic examination consisted of erythrocyte counts, total¹ and differential leucocyte counts, hematocrits², and hemoglobin³ concentrations. These studies were performed individually on 6 male and 6 female rats randomly selected in the control and each test group during the control period and again at 30, 60, and 90 days.

b. Urinalysis:

Urine samples were obtained from the same animals at the same time intervals used to obtain blood for hematology. Urinalysis

¹ Coulter Particle Size Counter, Model A., Coulter Electronics, 590 W. 20th Street, Hialeah, Florida.

² Miller, S., Microcapillary Method, Textbook of Clinical Pathology, 1960, Williams and Wilkins Company, Philadelphia, Pa., p. 43.

³ Miller, S., Cyanmethemoglobin Method, Textbook of Clinical Pathology, 1960, Williams and Wilkins Company, Philadelphia, Pa., p. 35.

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Page 6

consisted of qualitative tests for glucose,^{4,5,6} bilirubin⁷, occult blood,^{8,9,10} and albumin,^{4,11,12,13} measurements of volume, pH¹⁴ and specific gravity, and microscopic examination of the urinary sediments.

c. Biochemistry:

Biochemical examinations were conducted at the same intervals as for hematology. Serum transaminase (SGOT and SGPT)¹⁵ and plasma alkaline phosphatase determinations¹⁶ were performed on 6 male

4 "Combistix" (Ames Reagent Strips).

5 "Clinistix" (Ames Reagent Strips).

6 "Clinitest" (Ames Reagent Tablets).

7 "Ictotest" (Ames Reagent Tablets).

8 "Hemastix" (Ames Reagent Strips).

9 "Hematest" (Ames Reagent Tablets).

10 "Occultest" (Ames Reagent Tablets).

11 "Albustix" (Ames Reagent Strips).

12 "Bumintest" (Ames Reagent Tablets).

13 Heller's Ring Test, Practical Physiologic Chemistry, Hawk, Oser and Summerson, 13th Ed., p. 830.

14 Beckman Expanded Scale pH Meter, Model No. 76.

15 Reitman, S., and Frankel, S., Colorimetric Method for the Determination of Serum Transaminase Activity, Am. J. of Clin. Path., 28: 56, 1957.

16 Marsh, W., Modified King-Armstrong Method, Clin. Chem. 5: 119, 1959.

125-016

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Page 7

and 6 female rats randomly selected from the control and treated groups. The animals chosen for hematology values were not used for these biochemical determinations.

B. RESULTS:

1. General Behavior and Appearance:

No adverse changes in behavior or appearance were encountered that could be related to the administration of [REDACTED]

Animals in the control and all treated groups appeared essentially normal each day with the exception of an occasional rat in each group that exhibited slight nasal and/or ocular porphyrin discharge.

Other incidental findings, unrelated to compound administration, included one treated female animal (Rat #14374) at the 5000 ppm. dietary level which exhibited a swollen nose in the 13th week of study, one treated male (Rat #14298) at this dietary level which exhibited a mass on the flank from the 16th week (withdrawal period) until terminal necropsy examination, and one treated male (Rat #14324) at this same dietary level which exhibited destruction of the right eye, from the 15th week to the terminal (in the withdrawal period) necropsy examination.

2. Body Weights (Tables 1-8 and Figures 1 and 2):

a. Control:

The control animals maintained body weight curves which were consistent with those curves exhibited by control animals of the same age and strain maintained in these laboratories from time-to-time.

b. 100 and 500 ppm.*:

Male and female rats at these dietary levels maintained body weights which paralleled closely those of their respective control groups.

* 500 ppm. dietary level increased to 1000 ppm. in the 6th week of study.
[REDACTED]

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Page 8

c. 2500 ppm.**:

No marked body weight changes occurred among male and female rats at this dietary level during the course of compound administration. Male animals in the 9th week exhibited a body weight gain 8.8 per cent less than control males. This difference in body weight gain persisted for the duration of the study period. During the withdrawal phase of this study the greatest decrease in body weight gain occurred. Even then, however, this difference was only about 10 per cent less than that of the male control animals.

Female treated animals in this group in the 7th week of study exhibited a weight gain which was 11.5 per cent less than that of the control female animals. This difference in body weight gain persisted for the duration of the treatment period. The greatest difference in body weight gain of the female group was noted in the 12th week of study at which time a difference of only 11.7 per cent occurred.

3. Food Consumption (Tables 10 and 11):

a. Grams/Rat/Week:

Average total weekly food consumption for male and female rats in those groups receiving 100 ppm. and 500 ppm.* compared favorably with similar measurements obtained from the control group.

Treated rats receiving 2500 ppm.** showed food consumption values less than those of control animals beginning in the 4th week for treated females and in the 8th week for treated males. This decrease in food consumption continued throughout the study period and ranged from 1.1 to 8.7 per cent for the males and 5.2 to 16.4 per cent for the females in this group. The decreased food consumption in this

* 500 ppm. dietary level increased to 1000 ppm. in the 6th week of study.
** 2500 ppm. dietary level increased to 5000 ppm. in the 6th week of study.

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Page 9

group continued in both sexes for the duration of the treatment period.

b. Grams/Kg./Day:

No biologically meaningful differences were observed on food consumption in the treated groups of rats when compared with the control group on a basis of grams/kg./day food consumed.

4. Survival (Table 9):

Other than for those animals subjected to interim necropsy examination at 30 and 60 days, all control and treated animals survived the course of study with two exceptions. One control female (Rat #14160) succumbed in the terminal (13th) week of study and one treated male (Rat #14212) at the 100 ppm. level of [REDACTED] succumbed in the 11th week of study.

5. Laboratory Tests:

a. Hematology:

No compound-related hematologic changes were found at the 100 and 500 ppm. dietary levels of [REDACTED]. At the 2500 ppm. level, group values for both sexes, with respect to erythrocyte count, hematocrit and hemoglobin concentration, generally were slightly lower than those for the control animals and rats at the 100 and 500 ppm. dietary levels of [REDACTED]. Although some changes in these parameters were seen at the 60-day interval of examination, they were overall more pronounced after 90 days of compound administration. It is of interest that inspection of these values for individual rats in the high dietary level groups failed to reveal marked changes for any given animal, that is, whereby that animal's value would tend to markedly lower the group average, but rather that lower values, with a relatively small spread from individual to individual, were found for most of these rats.

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Page 10

Group average values are summarized for male rats in Table 12 and for female rats in Table 13. Individual values for all male and female rats appear in Tables 14 through 17.

b. Plasma Biochemistry:

No compound-related changes were found at any period of examination with respect to serum alkaline phosphatase activity or serum glutamic pyruvic transaminase (SGPT) or serum glutamic oxalacetic transaminase (SGOT) activities.

Values obtained in these studies appear in Tables 18 through 21.

c. Urinalysis:

Urinalysis examinations failed to reveal changes which were considered to be related to treatment with the test compound. Results of these measurements appear in Tables 22 through 25.

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Page 11

IV. PATHOLOGICAL STUDIES

A. METHODS:

1. Gross Examination:

After 30 and 60 days of compound administration, 3 male and 3 female rats from the control and each treated group were sacrificed by exsanguination and subjected to necropsy examination. After 90 days of compound administration, 10 male and 10 female rats from the control, 1000, and 5000 ppm. dietary level groups and all surviving rats from the 100 ppm. group were sacrificed by exsanguination and subjected to necropsy examination. Three male and 3 female rats from the control, 1000 and 5000 ppm. groups were sacrificed and subjected to necropsy examination after a 21-day compound withdrawal period. (Other rats that remained on withdrawal beyond 21 days will be reported on in a separate report.)

At necropsy major organs were weighed and representative tissues from each rat were collected into 10 per cent neutral buffered formalin for subsequent histologic processing. At the 90-day sacrifice, specimens of brain, liver, kidneys, muscle, fat, spleen, testes and blood were pooled by sex and dietary group, frozen and forwarded to the sponsor. Specimens of liver from the interim and withdrawal sacrifice were also pooled by sex and dietary group, frozen and shipped to the sponsor.

Rats which died on study were also subjected to necropsy examination unless this was precluded by advanced autolysis.

2. Microscopic Examination:

The following tissues from each of 3 male and 3 female rats from the control and high dosage groups from the 30 and 60-day interim and 21-day withdrawal sacrifices and from each of 10 male and 10

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Page 12

female control and high dietary group rats from the 90-day terminal sacrifice were paraffin-embedded, sectioned, stained with hematoxylin and eosin and examined microscopically:

brain	heart	pancreas
spinal cord	spleen	liver
peripheral nerve	lymph node	kidneys
eye	thymus	urinary bladder
pituitary	bone marrow	testes or ovaries
thyroid	salivary gland	prostate or uterus
parathyroid	stomach	skeletal muscle
adrenal	small intestine	skin
lung	large intestine	bone

Sections of liver from 10 male and 10 female rats from the 1000 ppm. level - 90-day sacrifice rats were also processed as above and examined.

B. RESULTS:

1. Gross Pathology (Table 26) and Organ Weights (Tables 27 and 28):

Compound related gross changes observed at necropsy were limited to male rats from the 1000 and 5000 ppm. dietary level groups and consisted of pale, yellowish livers in some but not all male rats from the 5000 ppm. dietary level group and in a few rats from the 1000 ppm. dietary level group.

None of the rats dying on study died of compound related causes. Rat #14160 (Control) died of pneumonia. Autolysis precluded diagnostic necropsy of Rat #14212 (100 ppm.).

Compound related variations in organ weights were limited to the livers and kidneys of treated rats. At the 90-day sacrifice there was a moderate increase in actual and relative liver weights of the 1000 and 5000 ppm. dietary level rats. This increase was also seen in the 5000 ppm. dietary level rats at the 60-day interim

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Page 13

sacrifice and in the 2500 ppm. dietary level rats at the 30-day interim sacrifice. After 21 days of compound withdrawal, a slight increase in liver weight persisted at the 5000 ppm. dietary level.

Mean actual and relative kidney weights were slightly ^{higher} in the 1000 and 5000 ppm. dietary level rats at the 90-day sacrifice. Kidney weights were also slightly increased in the 1000 and 5000 ppm. level rats at the 60-day interim sacrifice and 21-day withdrawal sacrifice and in the 500 and 2500 ppm. level at the 30-day interim sacrifice. Although the values from the interim and withdrawal sacrifices represent only 3 rats per sex group, these variations in kidney weights always had a dietary-level relationship.

2. Histopathology (Tables 29 and 30):

Compound related histopathologic changes were found only in the livers of rats from the highest (2500-5000 ppm.) dietary level and consisted of slight hypertrophy of centrolobular hepatocytes. Affected liver cells had cytoplasm which was less coarsely granular and more homogeneous than the unaffected cells at the periphery of the liver lobules and in the livers of rats in the control and lower dietary levels. This change, to a slight degree was seen after 30 days at the 2500 ppm. level. After this group was raised to 5000 ppm., the change was more marked at the 60 and 90-day sacrifices. A very slight change persisted in the 5000 ppm. level male rats sacrificed after a 21-day compound withdrawal period. This liver change was always more marked in male rats and was seen only at the highest (2500-5000 ppm.) dietary level.

No lesions in other organs were considered to have been of compound related origin. No histologic basis was found for the slight increase in kidney weights in treated rats.

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Ninety-Day Feeding Study in the Rat.

TABLE 1. Individual Weekly Body Weights, Grams.

Rat Number	Control Period		Compound Administration Weeks									
	1	2	1	2	3	4	5	6	7	8	9	10
<u>Control - Female:</u>												
14142	55	93	129	149	175	185	195	Sacrificed				
14143	54	68	95	123	136	144	155	169	191	198	Sacrificed	
14144	56	99	134	163	187	207	249	260	285	296	306	314
14145	56	83	107	130	142	159	166	Sacrificed				
14146	56	94	136	161	184	196	217	Sacrificed				
14147	55	91	123	141	160	179	184	191	231	218	221	236
14148	57	88	124	149	170	178	197	214	249	241	252	268
14149	60	101	135	162	177	199	215	230	261	265	Sacrificed	
14150	55	72	103	126	149	164	191	213	243	243	252	271
14151	58	83	116	137	158	181	189	202	237	224	224	234
14152	56	67	114	133	154	171	189	203	235	226	Sacrificed	
14153	50	52	93	122	138	143	166	183	231	207	216	248
14154	57	63	82	117	141	156	172	195	237	225	233	246
14155	57	71	116	142	160	170	192	203	239	223	244	258
14156	51	67	115	139	161	161	196	210	243	241	250	261
14157	58	64	105	121	134	154	153	166	165	174	178	185
14158	57	73	106	132	153	149	172	190	232	244	215	236
14159	58	54	99	146	156	181	199	219	240	232	250	264
14160	50	76	124	147	162	157	189	206	221	215	239	256
14161	54	48	91	128	148	144	178	192	231	214	226	236
Mean	55	75	112	138	157	169	188	203	234	229	236	251

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Ninety-Day Feeding Study in the Rat.

TABLE 1. Continued. Individual Weekly Body Weights, Grams.

Rat Number	Compound Administration Weeks								
	11	12	13	14*	15	16	17	18	19
<u>Control - Female:</u>									
14144	320	326	332						
14147	244	252	332						
14148	271	285	267						
14150	285	288	233						
14151	241	251	242						
14153	260	248	244						
14154	256	263	241						
14155	265	271	238						
14156	275	283	259						
14157	200	200	191						
14158	245	253	231	250	264	266	Sacrificed		
14159	277	281	282	289	299	310	Sacrificed		
14160	265	271	Died						
14161	241	251	257	261	268	276	Sacrificed		
14313				242	249	251	256	255	254
Mean	260	266	258	261	270	276	256	255	254

* Initiation of withdrawal period (14th week).

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Ninety-Day Feeding Study in the Rat.

TABLE 2. Individual Weekly Body Weights, Grams.

Rat Number	Control Period		1	2
	1	2		
<u>Control - Male:</u>				
14162	64	99	143	185
14163	62	97	151	207
14164	60	100	89	169
14165	59	94	157	214
14166	55	92	133	175
14167	50	67	103	145
14168	61	98	147	189
14169	45	74	113	143
14170	58	95	136	185
14171	51	83	119	158
14172	60	83	152	205
14173	52	55	105	153
14174	51	64	113	155
14175	54	76	137	185
14176	57	76	136	180
14177	54	71	123	167
14178	62	64	117	153
14179	52	66	130	181
14180	53	67	120	172
14181	55	67	128	177
Mean	55	79	128	175

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Compound		Administration		Weeks			
3	4	5	6	7	8	9	10
230	244	263	Sacrificed				
256	294	309	338	354	388	402	412
229	288	324	366	388	446	461	480
251	309	346	Sacrificed				
211	248	274	300	321	344	360	379
187	231	260	290	311	308	Sacrificed	
243	276	308	Sacrificed				
224	274	307	337	365	395	413	433
231	265	285	317	348	380	Sacrificed	
191	260	257	287	310	349	364	390
263	307	300	336	371	417	441	467
199	242	263	291	306	334	346	370
204	238	273	318	341	373	382	412
234	251	293	317	370	422	449	469
222	264	294	328	354	390	393	420
209	241	271	300	318	336	341	358
200	234	250	283	311	340	Sacrificed	
231	238	261	322	347	380	395	420
224	272	300	334	360	388	398	423
234	241	300	344	373	401	409	441
224	261	287	318	344	376	397	420

Ninety-Day Feeding Study in the Rat.

TABLE 2. Continued. Individual Weekly Body Weights, Grams.

Rat Number	11	12	13	14*	15	Compound Administration Weeks	16	17	18	19
<u>Control - Male:</u>										
14163	406	391	375							
14164	505	505	495							
14166	398	409	383							
14169	446	453	431							
14171	412	423	385							
14172	488	483	478							
14173	389	405	376							
14174	427	440	401							
14175	498	496	506							
14176	442	452	425							
14177	365	374	357	396	402	414	Sacrificed			
14179	435	455	461	479	489	500	Sacrificed			
14180	415	463	461	489	472	514	Sacrificed			
14181	451	463	472	476	466	497	506	515	522	
14314				538	518	556	574	571	585	
14315				512	503	523	539	544	559	
Mean	434	444	429	482	475	501	540	543	555	

* Initiation of withdrawal period (14th week).

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Ninety-Day Feeding Study in the Rat.

TABLE 3. Individual Weekly Body Weight, Grams.

Rat Number	Control Period		Compound Administration Weeks									
	1	2	1	2	3	4	5	6	7	8	9	10
<u>100 ppm. - Female:</u>												
14182	56	86	112	131	151	167	175	Sacrificed				
14183	51	77	123	153	171	203	210	231	250	262	273	285
14184	59	82	113	126	145	165	182	194	211	218	Sacrificed	
14185	55	87	110	135	154	174	186	Sacrificed				
14186	57	101	144	176	210	252	251	275	290	303	307	331
14187	55	76	109	134	155	175	194	206	230	245	252	269
14188	55	80	111	124	139	149	162	Sacrificed				
14189	55	63	91	119	150	168	177	198	216	230	245	257
14190	55	88	116	137	154	176	180	200	211	225	225	242
14191	53	84	122	153	177	187	208	223	241	258	269	286
14192	54	60	106	127	141	172	174	185	193	207	215	234
14193	53	67	113	141	158	181	199	210	222	238	Sacrificed	
14194	61	73	90	124	148	160	179	203	221	234	Sacrificed	
14195	59	69	107	133	157	175	190	211	231	245	243	265
14196	57	65	105	147	159	179	183	199	213	227	236	267
14197	50	58	98	121	146	157	179	197	207	227	238	258
14198	62	76	123	141	167	195	202	220	237	253	259	270
14199	51	60	102	125	141	144	180	197	215	236	241	256
14200	53	70	123	147	165	184	197	212	224	244	246	264
14201	59	65	115	152	179	183	208	235	245	263	271	275
Mean	56	74	112	137	158	177	191	212	227	242	251	269

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Ninety-Day Feeding Study in the Rat.

TABLE 3. Continued. Individual Weekly Body Weights, Grams.

Rat Number	Compound Administration Weeks								
	11	12	13	14	15	16	17	18	19
<u>100 ppm.:- Female:</u>									
14183	290	306	283						
14186	345	353	333						
14187	271	285	258						
14189	272	274	252						
14190	248	255	227						
14191	287	303	283						
14192	236	248	221						
14195	280	286	261						
14196	277	276	247						
14197	251	262	244						
14198	283	296	278						
14199	261	269	273						
14200	273	278	285						
14201	298	301	308						
Mean	277	285	268						

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Ninety-Day Feeding Study in the Rat.

TABLE 4. Individual Weekly Body Weight, Grams.

Rat Number	Control Period		Compound Administration Weeks									
	1	2	1	2	3	4	5	6	7	8	9	10
<u>100 ppm. - Male:</u>												
14202	58	79	119	168	214	246	270	Sacrificed				
14203	51	76	116	157	201	224	261	296	328	356	376	400
14204	62	87	149	203	256	310	343	371	407	448	467	495
14205	55	86	139	189	242	275	286	Sacrificed				
14206	63	103	160	215	255	298	320	346	373	403	405	434
14207	54	85	124	165	209	248	282	306	338	363	378	402
14208	55	81	120	159	199	211	228	Sacrificed				
14209	55	88	128	166	209	244	254	269	301	327	347	372
14210	60	86	142	197	252	303	330	354	388	398	417	454
14211	54	87	134	173	217	251	284	312	339	369	385	410
14212	50	60	108	122	130	168	211	250	256	296	317	300
14213	53	81	116	161	195	238	243	271	290	305	308	335
14214	61	83	149	205	267	284	326	352	377	399	407	441
14215	63	83	136	171	210	250	259	267	289	320	349	375
14216	53	70	126	164	217	271	308	247	377	407	420	457
14217	49	58	97	135	168	186	219	260	286	316	Sacrificed	
14218	58	64	100	142	199	247	286	330	369	398	321	454
14219	55	73	121	155	207	216	275	310	333	358	364	393
14220	61	68	110	136	196	213	264	287	307	329	Sacrificed	
14221	60	74	135	176	227	255	281	308	331	357	Sacrificed	
Mean	57	79	127	168	214	252	277	308	335	362	376	409

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Ninety-Day Feeding Study in the Rat.

TABLE 4. Continued. Individual Weekly Body Weight, Grams.

Rat Number	Compound Administration Weeks								
	11	12	13	14	15	16	17	18	19
<u>100 ppm. - Male:</u>									
14203	411	440	427						
14204	521	527	515						
14206	450	468	432						
14207	423	436	410						
14209	385	398	363						
14210	462	477	481						
14211	432	456	432						
14212	Died								
14213	353	368	348						
14214	446	456	448						
14215	385	405	383						
14216	482	501	500						
14218	473	496	507						
14219	406	421	430						
Mean	433	450	437						

Company Sanitized, Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 5. Individual Weekly Body Weight, Grams.

Rat Number	Control Period		Compound Administration Weeks									
	1	2	1	2	3	4	5	6	7	8	9	10
<u>500 ppm. - Female:*</u>												
14222	55	88	126	153	177	190	204	Sacrificed				
14223	60	83	116	134	154	172	181	195	202	213	Sacrificed	
14224	58	92	111	127	141	163	185	200	212	238	273	260
14225	48	59	91	115	136	141	154	Sacrificed				
14226	57	73	115	140	161	182	188	204	215	223	235	247
14227	57	92	130	157	178	201	210	230	244	256	264	276
14228	55	86	130	154	166	178	197	Sacrificed				
14229	55	78	113	140	160	174	184	202	215	237	254	261
14230	55	90	119	134	147	158	175	190	202	215	Sacrificed	
14231	52	76	114	153	184	195	219	237	254	272	287	303
14232	50	57	100	134	147	174	186	204	216	234	241	253
14233	52	64	105	125	130	148	160	170	181	191	201	204
14234	59	73	110	129	140	140	164	176	187	195	Sacrificed	
14235	58	68	119	148	175	201	214	255	249	266	279	297
14236	56	76	117	150	171	193	213	216	236	242	248	263
14237	52	52	86	123	145	146	168	188	200	212	221	223
14238	50	77	119	150	171	195	199	211	222	227	236	243
14239	57	74	129	146	163	183	198	206	221	234	242	253
14240	55	75	117	138	154	157	188	197	214	224	230	245
14241	55	72	100	128	144	143	180	188	200	206	216	236
Mean	55	75	113	139	157	172	188	204	216	229	243	255

* Dosage level increased in the 5th week of study to 1000 ppm.

Ninety-Day Feeding Study in the Rat.

TABLE 5. Continued. Individual Weekly Body Weights, Grams.

Rat Number	Compound Administration Weeks								
	11	12	13	14*	15	16	17	18	19
<u>500 ppm. - Female:</u>									
14224	267	279	263						
14226	246	257	239						
14227	244	282	269						
14229	265	277	270						
14231	310	314	268						
14232	255	269	251						
14233	212	216	207						
14235	304	312	299						
14236	262	272	254						
14237	232	244	234						
14238	253	256	242	263	276	278	Sacrificed		
14239	259	266	261	262	272	279	Sacrificed		
14240	256	263	259	274	278	280	Sacrificed		
14241	235	245	246	254	269	267	269	282	276
14306				254	266	270	272	284	284
14308				249	258	266	265	273	283
14320				234	236	241	246	250	253
Mean	257	268	254	256	265	269	263	272	274

* Initiation of withdrawal period (14th week).

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 6. Individual Weekly Body Weight, Grams.

Rat Number	Control Period		Compound Administration Weeks									
	1	2	1	2	3	4	5	6	7	8	9	10
<u>500 ppm. - Male:</u> *												
14242	58	85	124	155	185	201	228	Sacrificed				
14243	57	92	136	178	226	269	297	325	351	374	387	410
14244	56	78	134	196	249	295	314	371	412	443	465	485
14245	63	96	136	172	213	251	265	Sacrificed				
14246	56	63	91	133	172	210	234	268	292	320	Sacrificed	
14247	58	72	120	162	209	266	305	342	365	386	407	430
14248	55	83	114	149	183	208	234	Sacrificed				
14249	62	90	134	176	224	270	291	325	356	381	378	415
14250	58	85	130	192	236	276	300	321	334	359	379	397
14251	52	75	124	165	207	239	272	297	328	357	Sacrificed	
14252	63	89	147	195	249	293	321	355	326	391	399	445
14253	62	78	144	189	230	238	299	327	355	379	Sacrificed	
14254	55	75	134	187	235	258	297	317	348	381	Sacrificed	
14255	57	70	123	162	188	221	250	281	306	329	396	423
14256	55	67	102	140	182	221	258	280	300	328	345	368
14257	53	81	117	154	192	219	268	306	339	369	334	351
14258	56	98	151	189	235	285	328	359	385	412	365	390
14259	52	63	105	145	191	225	249	274	303	330	425	453
14260	58	69	124	169	220	229	289	324	352	372	385	372
14261	59	79	151	203	271	285	324	377	408	436	446	398
Mean	57	79	127	170	215	248	281	321	345	373	390	415

* Dosage level increased in the 5th week of study to 1000 ppm.

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 6. Continued. Individual Weekly Body Weights, Grams.

Rat Number	Compound Administration Weeks								
	11	12	13	14*	15	16	17	18	19
<u>500 ppm. - Male:</u>									
14243	445	435	422						
14244	509	525	499						
14247	449	471	447						
14249	434	451	441						
14250	412	431	411						
14252	453	463	434						
14254	452	437	428						
14255	382	396	380						
14256	369	377	348						
14257	408	415	390						
14258	478	499	477	517	496	545	Sacrificed		
14259	384	404	419	435	446	465	Sacrificed		
14260	400	417	434	452	458	476	Sacrificed		
14261	500	520	548	568	542	563	582	612	632
14321				507	487	532	538	559	544
14322				516	497	531	545	550	549
14325				549	525	562	569	586	577
Mean	434	446	434	506	493	525	559	577	576

* Initiation of withdrawal period (14th week).

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 7. Individual Weekly Body Weights, Grams.

Rat Number	Control Period		Compound Administration Weeks									
	1	2	1	2	3	4	5	6	7	8	9	10
<u>* 2500 ppm. - Female</u>												
14262	52	87	120	138	164	174	181*	Sacrificed				
14263	53	79	119	145	166	182	200	230	246	264	Sacrificed	
14264	53	71	107	124	140	149	160	169	180	195	194	207
14265	55	72	104	127	143	154	165	Sacrificed				
14266	50	63	78	109	133	153	171	181	195	208	222	228
14267	55	76	113	134	147	163	175	188	202	216	223	232
14268	63	85	114	132	137	135	158	Sacrificed				
14269	56	86	115	130	148	163	173	182	192	200	202	216
14270	56	85	116	136	151	161	171	174	184	193	Sacrificed	
14271	60	95	134	161	180	187	212	225	240	246	256	260
14272	58	74	117	134	148	158	173	186	193	200	207	213
14273	51	66	116	140	161	169	185	197	202	210	220	226
14274	47	61	99	133	151	171	182	195	206	219	215	225
14275	57	75	122	144	168	174	198	207	222	233	Sacrificed	
14276	52	63	107	135	148	162	179	191	209	226	231	243
14277	52	66	106	134	152	151	168	188	196	208	205	223
14278	47	55	85	115	141	149	174	189	198	216	221	230
14279	61	76	123	144	160	155	185	206	211	222	230	236
14280	56	75	126	154	178	173	204	221	233	244	256	265
14281	53	66	108	132	146	142	171	180	189	193	207	207
Mean	55	75	113	136	154	161	179	196	207	218	221	229

* Dosage level increased in the 5th week of study to 5000 ppm.

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 7. Continued. Individual Weekly Body Weights, Grams.

Rat Number	Compound Administration Weeks								
	11	12	13	14*	15	16	17	18	19
<u>2500 ppm. - Female:</u>									
14264	205	216	201						
14266	226	228	213						
14267	234	244	213						
14269	214	217	208						
14271	261	264	244						
14272	207	210	204						
14273	226	233	223						
14274	226	218	212						
14276	262	260	263						
14277	228	232	212						
14278	229	241	231	249	259	270	Sacrificed		
14279	236	239	237	257	254	269	Sacrificed		
14280	274	276	276	278	284	285	Sacrificed		
14281	214	216	218	222	239	245	252	258	257
14311			233	246	253	260	278	278	
14326			233	236	239	246	258	261	
14329			198	202	209	207	220	218	
Mean	232	235	225	239	246	253	241	254	254

* Initiation of withdrawal period. (14th week)

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 8. Individual Weekly Body Weights, Grams.

Rat Number	Control Period		Compound Administration Weeks									
	1	2	1	2	3	4	5	6	7	8	9	10
<u>* 2500 ppm. - Male</u>												
14282	60	80	117	141	184	225	246	Sacrificed				
14283	53	84	124	151	193	237	268	299	321	343	354	374
14284	55	76	129	182	219	277	310	351	382	416	440	454
14285	55	84	133	178	226	260	283	Sacrificed				
14286	52	65	92	125	147	173	203	222	245	270	291	302
14287	55	84	133	181	227	262	289	308	332	357	371	388
14288	46	71	193	171	227	265	274	Sacrificed				
14289	60	98	151	194	249	298	322	373	404	437	Sacrificed	
14290	56	84	125	154	193	234	275	314	335	366	387	399
14291	57	60	107	163	206	228	271	306	332	354	370	381
14292	52	69	72	104	138	181	203	239	273	297	315	334
14293	57	82	143	184	228	261	285	312	339	364	Sacrificed	
14294	58	82	133	165	207	231	266	291	315	337	339	355
14295	64	92	149	189	228	265	294	341	378	416	Sacrificed	
14296	61	84	144	189	231	272	295	321	345	363	365	385
14297	58	75	133	196	247	281	323	363	396	385	422	446
14298	52	82	107	140	178	214	236	258	284	306	312	331
14299	63	89	143	190	241	290	325	351	378	406	411	435
14300	55	78	114	135	197	215	272	303	325	342	345	370
14301	52	76	132	169	205	240	271	292	312	332	345	370
Mean	56	80	129	165	209	245	276	308	335	358	362	380

* Dosage level increased in the 5th week of study to 5000 ppm.

Company Sanitized. Does not contain TSCA CBI

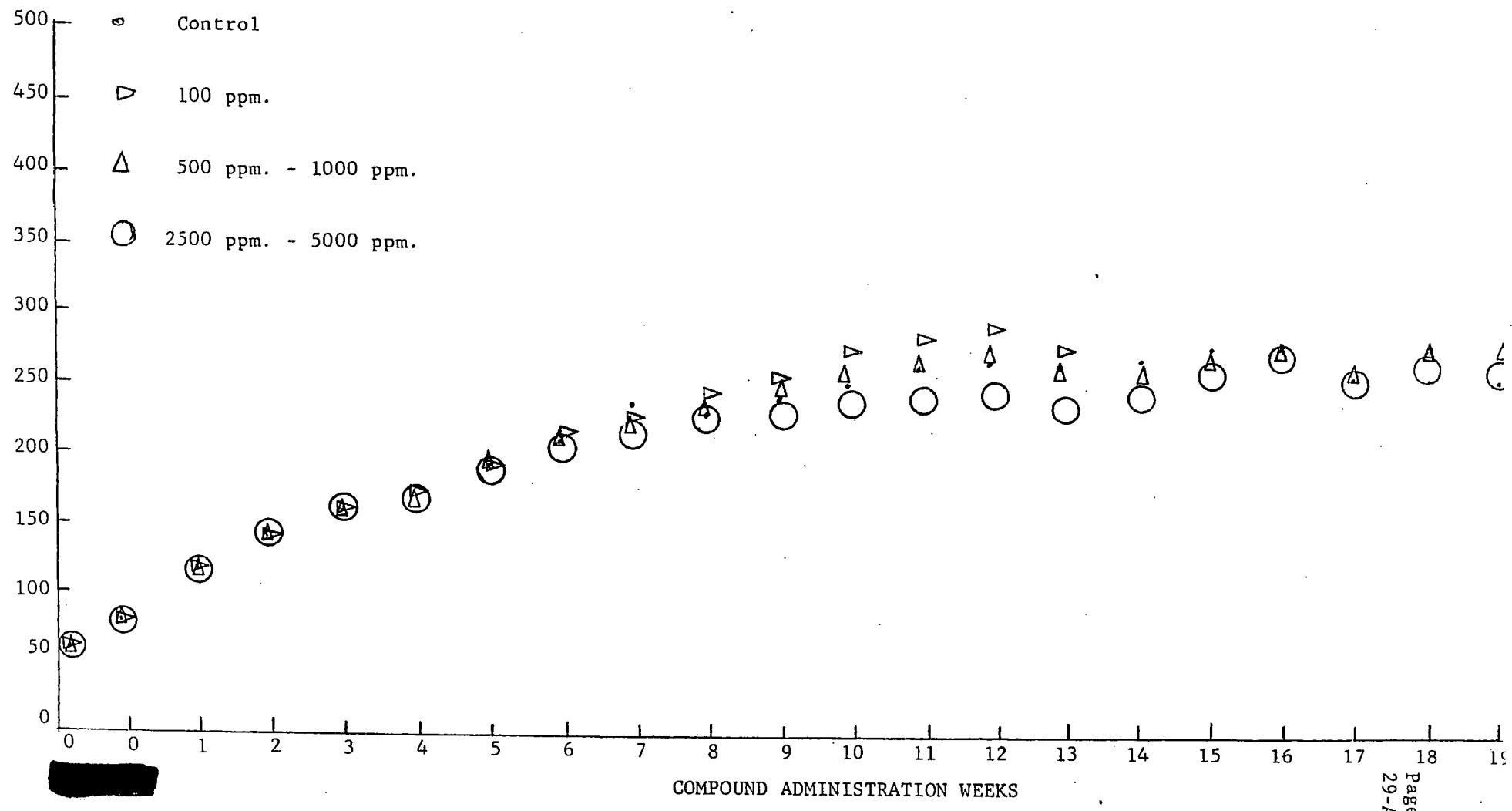
Ninety-Day Feeding Study in the Rat.

TABLE 8. Continued. Individual Weekly Body Weights, Grams.

Rat Number	Compound Administration Weeks								
	11	12	13	14*	15	16	17	18	19
<u>2500 ppm. - Male:</u>									
14283	394	410	393						
14284	478	507	497						
14286	318	328	316						
14287	400	414	401						
14290	415	425	413						
14291	401	410	385						
14292	344	373	357						
14294	367	388	364						
14296	405	418	412						
14297	468	480	456						
14298	349	465	327	341	339	342	Sacrificed		
14299	453	463	476	472	473	512	Sacrificed		
14300	381	395	407	416	429	442	Sacrificed		
14301	382	398	414	431	447	448	466	486	508
14327				362	377	390	497	427	433
14328				492	500	517	537	550	556
14324				461	478	489	500	516	531
Mean	397	420	401	425	435	449	500	495	507

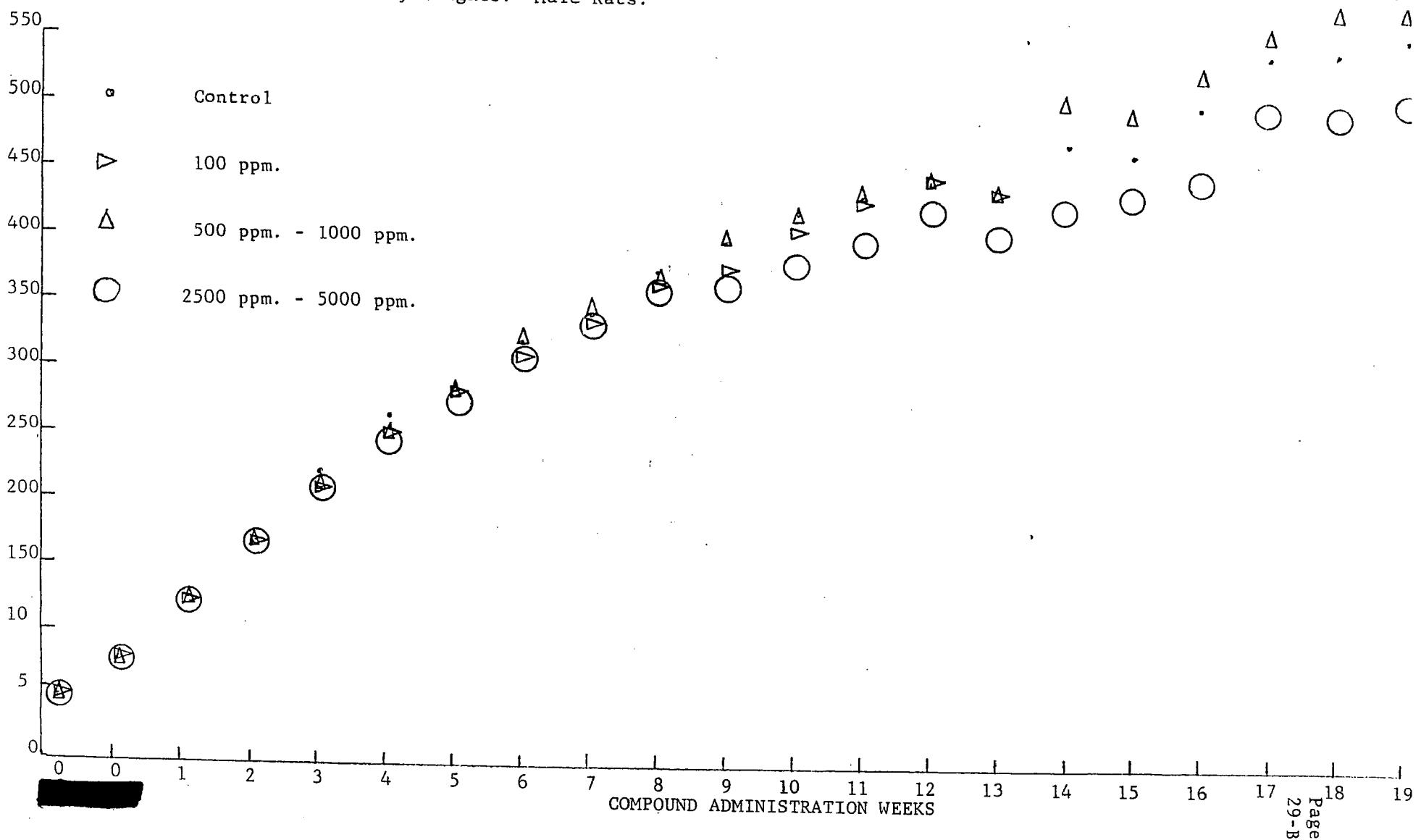
* Initiation of withdrawal period. (14th week)

FIGURE 1. Group Mean Body Weights. Female Rats



Company Sanitized. Does not contain TSCA CBI

FIGURE 2. Group Mean Body Weights. Male Rats.



Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

Table 9. Mean Body Weights, Grams; Weight Ranges, Grams; and Survival: FEMALE RATS.

Compound Adminis- tration Weeks	Control			100 ppm.			500 ppm.*			2500 ppm.**		
	Mean Body Wt.	Weight Ranges	Survival									
0	55	50-60	20/20	56	51-62	20/20	55	48-60	20/20	55	47-63	20/20
0	75	48-101	20/20	74	58-101	20/20	75	52-92	20/20	75	55-95	20/20
1	112	82-136	20/20	112	91-144	20/20	113	86-130	20/20	113	78-134	20/20
2	138	117-163	20/20	137	119-176	20/20	139	115-157	20/20	136	109-161	20/20
3	157	134-187	20/20	158	139-210	20/20	157	130-184	20/20	154	133-180	20/20
4	169	143-207	20/20	177	144-252	20/20	172	140-201	20/20	161	135-187	20/20
5	188	153-249	17/20	191	174-251	17/20	188	154-219	17/20	179	160-212	17/20
6	203	166-260	17/20	212	185-275	17/20	204	170-237	17/20	196	169-230	17/20
7	234	165-285	17/20	227	193-290	17/20	216	181-254	17/20	207	180-246	17/20
8	229	174-296	17/20	242	207-303	17/20	229	191-272	17/20	218	193-264	17/20
9	236	178-306	14/20	251	215-307	14/20	243	201-287	14/20	221	194-256	14/20
10	251	135-314	14/20	269	234-331	14/20	255	204-303	14/20	229	207-265	14/20
11	260	200-320	14/20	277	236-345	14/20	257	212-310	14/20	232	207-274	14/20
12	266	200-326	14/20	285	248-353	14/20	268	216-314	14/20	235	210-276	14/20
13	258	191-332	13/20	268	221-333	14/20	254	207-299	14/20	225	201-276	14/20
14	267	250-289	3/20			0/20	259	249-274	6/22	248	222-278	5/22
15	277	254-299	3/20				270	258-278	6/22	256	239-284	5/22
16	284	256-310	3/20				273	266-280	6/22	264	253-285	5/22
17			0/20				269	265-272	3/22	256	252-260	2/22
18							280	273-284	3/22	268	258-278	2/22
19							281	276-284	3/22	243	228-257	2/22

TE - Withdrawal period was initiated following 13-weeks of compound administration. Selected animals were continued into the period of withdrawal which continues at the writing of this report.

* Dosage level in this group increased to 1000 ppm. in the 5th week of study.

** Dosage level in this group increased to 5000 ppm. in the 5th week of study.

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 9. Continued. Mean Body Weights, Grams; Weight Ranges, Grams; and Survival: MALE RATS.

Compound Adminis- tration Weeks	Control			100 ppm.			500 ppm.*			2500 ppm.**		
	Mean Body Wt.	Weight Ranges	Survival									
0	55	45-64	20/20	57	49-63	20/20	58	52-63	20/20	56	45-64	20/20
0	79	55-100	20/20	79	58-103	20/20	80	63-98	20/20	80	60-98	20/20
1	128	89-157	20/20	127	97-160	20/20	127	91-151	20/20	129	72-193	20/20
2	175	143-214	20/20	168	122-215	20/20	169	125-203	20/20	165	104-196	20/20
3	224	187-263	20/20	214	130-267	20/20	215	172-271	20/20	209	138-249	20/20
4	261	231-309	20/20	252	168-310	20/20	248	201-293	20/20	245	173-298	20/20
5	287	250-346	17/20	277	211-343	17/20	281	234-324	17/20	276	203-325	17/20
6	318	283-366	17/20	308	250-371	17/20	321	268-377	17/20	308	222-373	17/20
7	344	306-388	17/20	335	256-407	17/20	345	292-412	17/20	335	245-404	17/20
8	376	308-446	17/20	362	296-448	17/20	373	320-443	17/20	358	270-437	17/20
9	397	341-461	14/20	376	317-467	14/20	390	334-465	14/20	362	291-440	14/20
10	420	358-480	14/20	409	300-495	14/20	415	351-485	14/20	380	302-454	14/20
11	434	365-505	14/20	429	353-521	13/20	434	369-509	14/20	397	318-478	14/20
12	444	374-505	14/20	446	368-527	13/20	446	377-525	14/20	420	328-507	14/20
13	429	357-506	14/20	437	363-515	13/20	434	348-548	14/20	401	316-497	14/20
14	447	242-538	7/23			0/20	472	234-568	8/24	378	198-492	9/25
15	443	249-518	7/23				461	236-542	8/24	387	202-500	9/25
16	465	251-556	7/23				489	241-563	8/24	399	209-517	9/25
17	469	256-574	4/23				496	246-582	5/24	394	207-537	6/25
18	471	255-571	4/23				511	250-612	5/24	410	220-550	6/25
19	480	254-585	4/23				511	253-632	5/24	418	218-556	6/25

TE - Withdrawal period was initiated following 13-weeks of compound administration. Selected animals were continued into the period of withdrawal which continues at the writing of this report.

* Dosage level in this group increased to 1000 ppm. in the 5th week of study.

** Dosage level in this group increased to 5000 ppm. in the 5th week of study.

Page

31

Ninety-Day Feeding Study in the Rat.

TABLE 10. FEMALE RATS: Mean Food Consumption, Grams/Rat/Week and Grams/Kilogram/Day; Compound Consumption as Milligrams/Kilograms/Day and Food Efficiency.

Compound Adminis- tration week	CONTROL			100 ppm.			500 ppm. *			2500 ppm. **								
	FOOD	g/r/wk	g/kg/d	FOOD	g/r/wk	g/kg/d	CPD.	mg/kg/d	FOOD	g/r/wk	g/kg/d	CPD.	mg/kg/d	FOOD	g/r/wk	g/kg/d	CPD.	mg/kg/d
0																		
1	96.1	122.3		99.6	126.8		12.7		98.9	124.8		62.4		91.4	115.9		289.8	
2	110.5	114.5	0.24	110.7	115.3	0.23	11.5		111.9	115.1	0.23	57.6		107.0	112.5	0.21	304.0	
3	110.8	100.6	0.17	116.6	105.7	0.18	10.6		117.9	107.0	0.15	53.5		108.9	101.3	0.17	253.3	
4	104.4	88.1	0.11	113.7	91.5	0.17	9.2		108.1	89.5	0.14	44.8		95.4	84.5	0.07	211.3	
5	113.8	86.7	0.17	113.1	84.8	0.12	8.5		110.2	83.5	0.15	41.8		107.6	86.0	0.17	215.0	
6	105.7	74.4	0.14	110.8	74.5	0.13	7.5		105.5	74.0	0.15	74.0		100.2	73.0	0.17	365.0	
7	111.5	67.9	0.28	115.4	72.7	0.13	7.3		110.5	73.1	0.11	73.1		102.7	71.0	0.11	355.0	
8	113.2	70.7	-.04	117.7	69.4	0.13	6.9		111.7	69.9	0.12	69.9		103.5	67.9	0.10	339.5	
9	108.1	65.3	0.07	112.8	64.1	0.08	6.4		112.2	65.8	0.12	65.8		93.6	60.6	0.03	303.0	
10	102.4	58.2	0.15	121.4	64.3	0.15	6.4		123.9	69.4	0.10	55.9		107.8	67.2	0.07	336.0	
11	112.6	61.6	0.09	129.4	66.8	0.06	6.7		116.7	65.0	0.02	65.0		98.0	60.3	0.03	301.5	
12	116.2	62.4	0.05	124.0	62.1	0.06	6.2		116.8	62.3	0.09	62.3		97.2	59.1	0.03	295.5	
13	123.9	68.6	-.05	128.1	68.3	-.13	6.8		128.8	72.4	-.11	72.4		112.0	71.1	-.09	355.5	
14	***58.0	54.3	+.09						***59.7	57.5	+.05			***66.8	63.7	+.20		
15	110.7	57.0	+.09						113.7	60.0	+.10			118.0	66.0	+.07		
16	114.0	57.4	+.06						111.0	58.2	+.03			115.2	61.4	+.07		
17									109.3	58.0	-.04			121.0	67.6	-.07		
18									111.0	56.8	+.01			119.5	63.8	+.10		
19									110.7	56.2	+.01			111.5	65.4	-.22		

NOTE - Withdrawal period was initiated following 13-weeks of compound administration. Selected animals were continued into the period of withdrawal which continues at the writing of this report.

* Dosage level increased to 1000 ppm. in the 5th week of study.

** Dosage level increased to 5000 ppm. in the 5th week of study.

*** Grams/rat/4 days.

Ninety-Day Feeding Study in the Rat.

TABLE 11. MALE RATS: Mean Food Consumption, Grams/Rat/Week and Grams/Kilograms/Day; Compound Consumption Mg./Kg./Day and Food Efficiency.

Compound Adminis- tration week	CONTROL			100 ppm.			500 ppm.*			2500 ppm. **									
	FOOD	g/r/wk	g/kg/d	FOOD	g/r/wk	g/kg/d	CPD.	mg/kg/d	FOOD	g/r/wk	g/kg/d	CPD.	mg/kg/d	FOOD	g/r/wk	g/kg/d	Eff.	CPD.	mg/kg/d
0																			
1	108.8	121.1		99.6	118.3		11.8		100.4	112.6		56.3		112.2	124.0			310.0	
2	135.5	110.9		126.3	107.1	0.33	10.7		128.8	108.9	0.33	54.5		121.6	105.5	0.30	263.8		
3	150.3	96.0		141.9	94.9	0.32	9.5		144.9	96.3	0.31	48.2		140.5	95.7	0.31	239.3		
4	151.7	83.1		151.1	85.7	0.25	8.6		145.3	83.9	0.23	42.0		145.0	84.5	0.25	211.3		
5	151.0	75.3	0.11	152.8	78.7	0.20	7.9		154.9	78.6	0.21	39.3		151.9	78.6	0.20	196.5		
6	146.6	65.7	0.21	148.0	68.5	0.21	6.9		150.0	66.7	0.26	66.7		149.9	69.5	0.21	347.5		
7	155.1	64.5	0.17	157.1	66.9	0.18	6.7		151.6	62.9	0.16	62.9		152.3	65.1	0.18	325.5		
8	165.2	62.8	0.19	158.2	62.4	0.17	6.2		161.8	61.9	0.17	61.9		154.1	61.5	0.15	307.5		
9	154.1	55.4	0.14	154.1	58.5	0.09	5.9		148.6	54.4	0.11	54.4		140.7	55.5	0.03	277.5		
10	159.9	54.3	0.14	166.6	58.2	0.20	5.8		162.5	55.9	0.15	55.9		146.8	38.7	0.12	293.5		
11	158.1	52.1	0.09	175.2	58.3	0.11	5.8		164.4	54.1	0.12	54.1		156.4	56.2	0.03	281.0		
12	162.8	52.5	0.06	170.9	54.7	0.10	5.5		159.6	51.1	0.08	51.1		150.6	51.2	0.03	256.0		
13	184.8	61.5	-.08	186.2	60.9	-.07	6.1		181.3	59.7	-.07	59.7		178.5	63.6	-.11	318.0		
14	***80.4	45.0	+.13					***89.3	47.2	+.24			***79.6	52.6	-.17				
15	145.1	46.7	-.03						150.3	46.6	-.07			138.8	51.2	-.06			
16	159.0	48.8	+.14						169.0	49.3	+.17			138.4	49.6	+.09			
17	162.0	49.3	+.02						167.4	48.2	+.04			138.3	50.3	-.04			
18	149.3	45.2	+.01						145.0	40.5	+.10			143.5	50.0	+.11			
19	149.5	44.6	+.06						161.8	45.2	0			145.5	49.8	+.05			

NOTE - Withdrawal period was initiated following 13-weeks of compound administration. Selected animals were continued into the period of withdrawal which continues at the writing of this report.

* Dosage level increased to 1000 ppm. in the 5th week of study.

** Dosage level increased to 5000 ppm. in the 5th week of study.

*** Grams/rat/4 days.

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 12. Summary of Hematologic Values for Male Rats.

Hematology	Compound Administration Month	Control	100 ppm.	500 ppm.*	2500 ppm.**
Hematocrit, %	0	47	45	45	44
	1	48	46	47	43
	2	48	45	45	38
	3	48	47	45	38
Hemoglobin gms./100 ml.	0	12.7	12.7	12.3	12.4
	1	14.6	14.1	14.5	13.3
	2	15.9	15.2	15.3	13.2
	3	15.7	15.0	14.7	12.0
Erythrocytes, $\times 10^6/\text{cmm.}$	0	6.38	6.04	6.21	6.04
	1	6.60	6.74	6.43	6.31
	2	7.21	7.55	7.35	6.29
	3	7.16	7.05	7.06	5.90
Leucocytes, $\times 10^3/\text{cmm.}$	0	10.75	9.90	12.48	11.30
	1	11.79	11.21	8.83	8.62
	2	11.22	9.40	11.24	11.93
	3	15.25	10.28	11.15	11.55
Neutrophils, %					
Seg., %	0	15	15	15	12
	1	7	17	14	11
	2	14	13	14	11
	3	17	20	16	8
Non-Seg., %	0	1	1	0	1
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
Lymphocytes, %	0	83	82	83	85
	1	90	82	85	87
	2	83	84	84	87
	3	80	78	82	89
Monocytes, %	0	1	1	1	1
	1	2	0	1	1
	2	3	2	1	1
	3	2	0	1	1
Eosinophils, %	0	0	1	1	1
	1	1	1	0	1
	2	0	1	1	1
	3	1	2	1	2
Basophils, %	0	0	0	0	0
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0

* Dosage level in this group increased to 1000 ppm. in the 5th week of study.

** Dosage level in this group increased to 5000 ppm. in the 5th week of study.

Ninety-Day Feeding Study in the Rat.

TABLE 13. Summary of Hematologic Values for Female Rats.

Hematology	Compound Administration Month	Control	100 ppm.	500 ppm. *	2500 ppm. **
Hematocrit, %	0	49	45	46	46
	1	49	46	45	43
	2	46	44	41	33
	3	45	47	40	33
Hemoglobin gms./100 ml.	0	13.3	12.3	12.4	12.9
	1	15.1	14.4	14.4	13.5
	2	15.8	14.8	14.3	11.7
	3	15.6	14.9	13.6	10.6
Erythrocytes, $\times 10^6/\text{cmm.}$	0	6.63	6.38	6.23	6.51
	1	7.13	6.82	6.51	6.30
	2	6.74	6.81	6.57	5.44
	3	6.64	6.82	6.21	5.54
Leucocytes, $\times 10^3/\text{cmm.}$	0	12.64	13.72	11.73	11.72
	1	9.41	7.40	9.08	11.53
	2	11.76	9.27	8.76	8.67
	3	10.96	9.04	10.14	11.38
Neutrophils, %					
Seg., %	0	14	11	14	11
	1	15	17	14	15
	2	15	13	17	12
	3	11	20	11	8
Non-Seg., %	0	0	0	0	0
	1	0	0	0	0
	2	0	0	0	0
	3	1	0	0	0
Lymphocytes, %	0	83	87	84	88
	1	81	81	84	84
	2	82	83	79	87
	3	85	77	88	90
Monocytes, %	0	1	2	1	1
	1	2	1	1	1
	2	2	2	2	1
	3	2	2	0	1
Eosinophils, %	0	1	0	1	0
	1	2	1	1	0
	2	1	2	2	0
	3	1	1	1	1
Basophils, %	0	0	0	0	0
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0

* Dosage level in this group increased to 1000 ppm. in the 5th week of study.
** Dosage level in this group increased to 5000 ppm. in the 5th week of study.

Ninety-Day Feeding Study in the Rat.

TABLE 14. Individual Rat Hematologic Values during Control Period.

Rat No. & Sex	Hematocrit %	Hemoglobin gms./100 ml.	Erythrocytes (x10 ⁶ /cmm.)	Leucocytes (x10 ³ /cmm.)	Total		Differential			
					Neutrophils Seg.%	Non-Seg.%	Lymphocytes %	Monocytes %	Eosinophils %	Basophils %
<u>Control:</u>										
14163M	46	12.6	6.09	7.29	7	1	92	0	0	0
14167M	50	14.0	6.90	14.00	13	0	84	3	0	0
14173M	45	12.3	6.42	12.82	31	0	69	0	0	0
14175M	46	12.7	6.01	10.32	9	2	85	4	0	0
14178M	48	12.6	6.94	11.52	21	1	78	0	0	0
14181M	45	12.0	5.91	8.57	9	0	91	0	0	0
Mean	47	12.7	6.38	10.75	15	1	83	1	0	0
14143F	48	13.2	6.14	16.18	9	0	90	1	0	0
14146F	48	12.5	6.14	12.34	19	0	80	1	0	0
14150F	48	13.2	6.89	14.18	20	0	75	3	2	0
14154F	50	13.9	6.98	13.03	8	0	91	1	0	0
14157F	49	13.1	6.40	9.74	7	0	92	0	1	0
14160F	49	13.6	7.22	10.38	21	0	78	0	1	0
Mean	49	13.3	6.63	12.64	14	0	84	1	1	0
<u>100 ppm.:</u>										
14204M	49	13.4	6.50	9.65	16	0	78	4	2	0
14208M	43	13.4	5.40	8.63	15	0	84	1	0	0
14210M	44	12.1	6.20	12.96	16	2	81	0	1	0
14205M	43	12.2	5.81	7.36	19	1	78	1	1	0
14216M	45	12.0	6.10	6.44	13	0	87	0	0	0
14220M	46	12.9	6.23	14.36	8	0	90	1	1	0
Mean	45	12.7	6.04	9.90	15	1	82	1	1	0
14184F	46	12.1	6.02	25.67	15	0	81	4	0	0
14189F	41	11.1	5.55	14.31	14	0	84	1	1	0
14191F	45	12.0	6.07	10.55	6	0	92	2	0	0
14194F	46	12.6	6.25	10.63	5	0	95	0	0	0
14198F	45	11.7	6.02	9.78	11	0	85	3	1	0
14201F	49	14.1	8.36	11.40	14	0	84	2	0	0
Mean	45	12.3	6.38	13.72	11	0	87	2	0	0

Company Sanitized. Does not contain TSCA CBI

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 14. Continued. Individual Rat Hematologic Values during Control Period.

Rat No. & Sex	Hematocrit %	Hemoglobin gms./100 ml.	Erythrocytes (x10 ⁶ /cmm.)	Leucocytes (x10 ³ /cmm.)	Total		Differential				
					Neutrophils Seg.%	Non-Seg.%	Lymphocytes %	Monocytes %	Eosinophils %	Basophils %	
<u>500 ppm.:</u>											
14244M	45	11.5	6.33	10.25	22	0	77	0	1	0	
14247M	44	12.3	6.66	13.42	21	0	78	1	0	0	
14249M	45	12.3	6.02	12.58	5	0	94	0	1	0	
14251M	47	13.0	6.22	10.76	15	0	82	3	0	0	
14255M	43	12.1	6.04	10.19	16	0	81	2	0	0	
14257M	46	12.6	5.99	17.68	10	0	88	1	1	0	
Mean	45	12.3	6.21	12.48	15	0	83	1	1	0	
14225F	48	13.3	6.74	23.52	24	0	75	1	0	0	
14227F	47	11.3	5.83	9.47	10	0	88	1	1	0	
14231F	44	12.8	6.51	10.19	10	0	89	1	0	0	
14233F	45	12.5	6.15	10.35	8	0	90	2	0	0	
14236F	45	12.4	6.13	8.58	19	0	79	0	2	0	
14241F	45	12.0	6.01	8.26	15	0	82	2	1	0	
Mean	46	12.4	6.23	11.73	14	0	84	1	1	0	
<u>2500 ppm.:</u>											
14284M	44	12.5	6.03	15.14	18	1	79	2	0	0	
14288M	46	12.9	6.48	10.32	12	0	88	0	0	0	
14290M	44	12.4	6.01	13.88	10	1	87	1	1	0	
14295M	43	12.3	5.72	8.92	11	0	86	2	1	0	
14298M	42	12.0	6.22	10.30	13	1	85	0	1	0	
14301M	44	12.0	5.77	9.21	8	0	90	2	0	0	
Mean	44	12.4	6.04	11.30	12	1	85	1	1	0	
14264F	46	13.0	6.25	11.62	13	1	85	1	0	0	
14267F	46	12.9	6.58	11.10	7	0	91	2	0	0	
14269F	45	12.2	6.13	8.96	11	0	87	1	1	0	
14276F	51	13.7	6.76	11.35	9	1	89	0	1	0	
14278F	43	12.2	7.16	17.47	8	0	90	2	0	0	
14281F	45	13.4	6.20	9.84	18	0	81	1	0	0	
Mean	46	12.9	6.51	11.72	11	0	88	1	0	0	

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 15. Individual Rat Hematologic Values at One Month.

Rat No. & Sex	Hematocrit %	Hemoglobin gms./100 ml.	Erythrocytes (x10 ⁶ /cmm.)	Leucocytes (x10 ³ /cmm.)	Total		Differential				
					Neutrophils Seg.%	Non-Seg.%	Lymphocytes %	Monocytes %	Eosinophils %	Basophils %	
<u>Control:</u>											
14162M	50	15.4	7.18	14.40	8	0	86	5	1	0	
14165M	46	13.9	6.66	14.75	6	0	91	3	0	0	
14168M	47	14.8	6.80	9.27	6	0	90	3	1	0	
14171M	47	14.5	6.22	14.34	5	0	94	1	0	0	
14174M	48	14.4	6.44	10.88	7	0	92	1	0	0	
14177M	47	14.5	6.30	7.08	10	0	88	1	0	0	
Mean	48	14.6	6.60	11.79	7	0	90	2	1	0	
14142F	48	14.7	6.87	7.82	14	0	82	1	3	0	
14144F	48	15.2	7.04	8.80	19	0	77	1	3	0	
14146F	50	15.5	8.12	11.60	18	0	77	3	2	0	
14148F	51	15.2	7.27	10.53	17	0	80	1	1	1	
14150F	47	14.3	6.61	7.00	14	0	80	3	3	0	
14153F	49	15.4	6.89	10.72	9	0	89	1	1	0	
Mean	49	15.1	7.13	9.41	15	0	81	2	2	0	
<u>100 ppm.:</u>											
14202M	44	13.6	6.32	19.70	7	0	90	1	2	0	
14205M	48	14.8	6.73	7.10	25	0	74	0	1	0	
14208M	47	14.6	7.08	8.22	30	0	69	0	1	0	
14211M	45	13.7	6.54	6.78	9	0	88	1	2	0	
14214M	49	13.8	7.03	11.69	23	0	76	0	1	0	
14217M	45	14.1	6.72	13.77	7	0	92	1	0	0	
Mean	46	14.1	6.74	11.21	17	0	82	0	1	0	
14182F	47	14.2	6.69	9.15	6	0	91	1	2	0	
14185F	44	13.6	6.68	3.97	46	3	49	1	1	0	
14188F	46	14.3	6.91	8.64	11	0	87	0	2	0	
14191F	48	14.8	7.10	6.98	18	0	81	1	0	0	
14194F	45	13.9	7.28	6.53	11	0	86	2	1	0	
14197F	46	14.4	6.30	9.15	8	0	91	1	0	0	
Mean	46	14.4	6.82	7.40	17	0	81	1	1	0	

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 15. Continued. Individual Rat Hematologic Values at One Month.

Rat No. & Sex	Hematocrit %	Hemoglobin gms./100 ml.	Erythrocytes (x10 ⁶ /cmm.)	Leucocytes (x10 ³ /cmm.)	Total		Differential			
					Neutrophils Seg.%	Non-Seg.%	Lymphocytes %	Monocytes %	Eosinophils %	Basophils %
<u>500 ppm.:</u>										
14242M	51	15.9	7.07	7.48	17	0	82	0	1	0
14245M	45	13.6	6.03	7.84	14	1	84	1	0	0
14248M	47	14.6	6.77	9.75	9	0	90	1	0	0
14251M	46	13.9	6.17	11.62	12	0	87	1	0	0
14254M	47	14.7	5.99	8.16	10	0	90	0	0	0
14257M	48	14.5	6.55	8.13	20	0	79	0	1	0
Mean	47	14.5	6.43	8.83	14	0	85	1	0	0
14222F	45	14.4	6.55	11.49	8	0	90	2	0	0
14225F	46	14.3	6.83	9.65	10	0	89	1	0	0
14228F	45	14.4	6.20	7.68	11	0	87	0	2	0
14231F	45	14.2	6.42	9.95	21	1	77	1	0	0
14234F	46	14.4	6.69	5.79	20	0	79	1	0	0
14237F	45	14.5	6.35	9.90	14	0	83	1	2	0
Mean	45	14.4	6.51	9.08	14	0	84	1	1	0
<u>2500 ppm.:</u>										
14282M	42	13.2	6.02	9.79	8	0	91	0	1	0
14285M	44	13.9	6.57	11.49	11	0	88	1	0	0
14288M	42	12.6	5.93	8.82	9	0	90	1	0	0
14291M	45	13.7	6.68	6.71	18	0	82	0	0	0
14294M	41	12.5	6.14	6.54	11	0	85	3	1	0
14297M	45	13.9	6.50	8.34	10	0	89	0	1	0
Mean	43	13.3	6.31	8.62	11	0	87	1	1	0
14262F	44	13.6	6.12	19.29	9	0	88	3	0	0
14265F	42	13.3	6.07	9.08	16	0	83	1	0	0
14268F	46	14.6	7.19	6.28	14	0	85	0	1	0
14271F	41	13.0	5.96	13.43	18	0	80	1	1	0
14274F	40	12.9	5.95	8.84	16	0	83	1	0	0
14277F	44	13.8	6.53	12.23	16	1	81	2	0	0
Mean	43	13.5	6.30	11.53	15	0	84	1	0	0

Ninety-Day Feeding Study in the Rat.

TABLE 16. Individual Rat Hematologic Values at Two Months.

Rat No. & Sex	Hematocrit %	Hemoglobin gms./100 ml.	Erythrocytes ($\times 10^6/\text{cmm.}$)	Total Leucocytes ($\times 10^3/\text{cmm.}$)	Neutrophils Seg.%	Neutrophils Non-Seg.%	Differential Lymphocytes %	Monocytes %	Eosinophils %	Basophils %
<u>Control:</u>										
14164M	47	15.4	7.02	11.44	7	0	90	2	1	0
14167M	49	16.5	7.43	13.95	12	0	83	5	0	0
14170M	52	16.6	7.47	11.11	5	0	93	1	1	0
14174M	47	15.6	7.07	9.73	31	0	64	5	0	0
14178M	47	16.0	7.00	11.22	19	0	81	0	0	0
14181M	48	15.4	7.24	9.88	8	0	90	2	0	0
Mean	48	15.9	7.21	11.22	14	0	83	3	0	0
14143F	47	15.4	6.67	11.86	32	0	67	1	0	0
14147F	48	16.2	6.78	15.15	9	0	87	3	1	0
14149F	49	16.4	7.26	10.64	9	0	88	1	2	0
14152F	41	15.2	6.36	10.92	22	0	78	0	0	0
14154F	50	15.8	7.03	12.83	7	0	90	3	0	0
14158F	42	16.0	6.31	9.16	8	0	90	2	0	0
Mean	46	15.8	6.74	11.76	15	0	82	2	1	0
<u>100 ppm.:</u>										
14204M	50	16.0	7.84	10.75	19	0	75	3	3	0
14210M	44	14.9	7.55	9.29	8	0	90	1	1	0
14213M	41	14.8	7.87	12.15	14	0	84	1	1	0
14217M	42	14.9	6.84	7.30	8	0	91	1	0	0
14220M	50	15.8	8.02	9.37	15	0	82	2	1	0
14221M	40	14.5	7.20	7.56	12	0	85	3	0	0
Mean	45	15.2	7.55	9.40	13	0	84	2	1	0
14184F	45	15.2	6.85	10.00	7	0	90	1	2	0
14190F	45	15.0	6.74	6.42	22	2	69	4	3	0
14193F	41	13.6	6.12	7.11	10	0	87	2	1	0
14194F	44	15.1	6.71	6.23	12	0	83	3	2	0
14196F	43	15.1	6.98	13.75	14	0	85	0	1	0
14200F	43	14.5	7.47	12.12	10	0	90	0	0	0
Mean	44	14.8	6.81	9.27	13	0	83	2	0	0

Ninety-Day Feeding Study in the Rat.

TABLE 16. Continued. Individual Rat Hematologic Values at Two Months.

Rat No. & Sex	Hematocrit %	Hemoglobin gms./100 ml.	Erythrocytes (x10 ⁶ /cmm.)	Leucocytes (x10 ³ /cmm.)	Total		Differential			
					Neutrophils Seg.%	Non-Seg.%	Lymphocytes %	Monocytes %	Eosinophils %	Basophils %
<u>1000 ppm.:</u>										
14243M	42	15.4	7.71	9.97	23	0	75	1	1	0
14246M	46	15.2	7.11	12.04	13	0	84	1	2	0
14251M	47	15.4	7.42	12.47	11	0	87	1	1	0
14253M	46	14.8	6.94	8.86	15	1	82	1	1	0
14257M	46	15.9	8.03	10.67	6	0	93	0	1	0
14261M	42	15.1	6.89	13.43	13	1	82	2	1	0
Mean	45	15.3	7.35	11.24	14	0	84	1	2	0
14223F	42	15.5	7.28	8.34	16	1	81	0	2	0
14226F	43	14.2	6.63	6.64	18	0	72	5	5	0
14230F	41	14.3	6.28	10.28	8	0	92	0	0	0
14234F	37	13.6	6.63	6.17	24	0	74	1	1	0
14237F	43	15.8	6.85	13.43	28	0	62	8	2	0
14240F	38	12.4	5.77	7.68	6	0	94	0	0	0
Mean	41	14.3	6.57	8.76	17	0	79	2	2	0
<u>5000 ppm.:</u>										
14283M	42	13.3	6.33	11.96	7	0	92	0	1	0
14289M	34	12.0	6.12	17.50	23	0	76	1	0	0
14293M	35	12.3	6.09	11.20	17	0	81	1	1	0
14295M	36	12.7	6.13	6.97	8	0	91	0	1	0
14297M	38	13.6	6.08	14.49	4	0	94	1	1	0
14300M	44	15.0	6.96	9.46	9	1	87	3	0	0
Mean	38	13.2	6.29	11.93	11	0	87	1	1	0
14263F	37	13.0	5.60	11.57	10	1	87	2	0	0
14270F	29	11.2	5.31	5.16	14	0	84	2	0	0
14273F	35	12.1	5.64	9.55	8	0	91	1	0	0
14275F	33	11.8	5.47	8.90	8	0	92	0	0	0
14279F	30	10.4	4.93	6.78	17	0	81	1	1	0
14281F	33	11.7	5.68	10.07	17	0	82	0	1	0
Mean	33	11.7	5.44	8.67	12	0	87	1	0	0

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 17. Individual Rat Hematologic Values at Three Months;

Rat No. & Sex	Hematocrit %	Hemoglobin gms./100 ml.	Erythrocytes (x10 ⁶ /cmm.)	Leucocytes (x10 ³ /cmm.)	Total		Differential			
					Neutrophils Seg.%	Non-Seg.%	Lymphocytes %	Monocytes %	Eosinophils %	Basophils %
Control:										
14164M	53	16.1	7.52	17.93	15	0	82	3	0	0
14169M	46	16.0	6.68	21.59	6	0	94	0	0	0
14172M	47	15.6	7.14	14.62	23	0	70	5	2	0
14176M	48	15.6	6.79	13.86	15	0	84	1	0	0
14179M	47	15.2	7.53	10.06	17	0	80	1	2	0
14181M	50	15.6	7.10	13.45	24	0	74	2	1	0
Mean	48	15.7	7.16	15.25	17	0	80	2	1	0
14147F	46	16.9	6.64	13.71	7	1	89	2	1	0
14151F	43	15.1	6.52	7.16	18	2	80	0	0	0
14154F	45	15.2	6.66	12.03	15	1	79	1	4	0
14156F	41	15.1	6.33	7.12	9	1	88	1	1	0
14158F	47	16.0	7.02	11.53	5	0	91	2	2	0
14161F	45	15.2	6.69	14.18	13	0	84	2	1	0
Mean	45	15.6	6.64	10.96	11	1	85	1	2	0
100 ppm.:										
14203M	45	14.5	6.60	13.85	40	1	58	1	0	0
14206M	50	15.2	7.47	10.73	24	0	73	0	3	0
14210M	47	14.8	6.91	9.58	7	0	91	0	2	0
14215M	46	15.1	6.80	7.47	20	1	78	0	1	0
14218M	46	14.6	6.90	12.35	16	0	82	0	2	0
14219M	50	15.6	7.60	7.71	12	0	87	0	1	0
Mean	47	15.0	7.05	10.28	20	0	78	0	2	0
14183F	49	15.6	6.89	12.16	13	0	85	2	0	0
14186F	50	15.3	7.26	10.83	29	0	69	1	0	1
14190F	38	12.0	6.09	6.65	28	3	63	3	2	1
14195F	49	15.9	6.89	5.57	11	0	87	1	1	0
14197F	50	16.0	6.77	11.79	15	0	85	0	0	0
14200F	46	14.8	7.03	7.25	26	0	73	1	0	0
Mean	47	14.9	6.82	9.04	20	0	77	2	1	0

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 17. Continued. Individual Rat Hematologic Values at Three Months.

Rat No. & Sex	Hematocrit %	Hemoglobin gms./100 ml.	Erythrocytes (x10 ⁶ /cmm.)	Leucocytes (x10 ³ /cmm.)	Total		Differential				
					Neutrophils Seg.%	Non-Seg.%	Lymphocytes %	Monocytes %	Eosinophils %	Basophils %	
<u>500 ppm.:</u>											
14244M	48	15.6	7.59	8.18	7	0	92	0	1	0	
14247M	45	14.4	6.91	10.44	23	0	74	0	3	0	
14252M	47	15.1	7.28	8.53	9	0	90	0	1	0	
14255M	44	13.9	6.48	11.35	12	0	86	0	2	0	
14257M	46	15.0	7.27	12.50	31	0	68	1	0	0	
14260M	43	14.0	6.82	15.89	13	0	84	2	1	0	
Mean	45	14.7	7.06	11.15	16	0	82	1	1	0	
14224F	43	14.2	6.14	9.40	6	0	93	0	1	0	
14227F	36	12.7	6.07	12.13	18	0	82	0	0	0	
14232F	41	14.6	6.52	12.63	16	0	84	0	0	0	
14236F	45	14.6	6.39	7.02	13	0	87	0	0	0	
14238F	39	12.8	6.22	9.94	6	0	94	0	0	0	
14240F	38	12.6	5.90	9.70	8	0	89	1	2	0	
Mean	40	13.6	6.21	10.14	11	0	88	0	1	0	
<u>2500 ppm.:</u>											
14283M	38	12.1	6.20	13.87	6	0	93	1	0	0	
14287M	35	11.8	5.29	8.41	8	0	91	0	1	0	
14291M	37	11.9	5.82	10.18	7	0	92	1	0	0	
14294M	35	11.0	5.15	12.18	11	1	84	0	4	0	
14297M	41	11.8	6.19	13.55	4	0	94	1	1	0	
14300M	41	13.4	6.73	11.12	13	1	79	4	3	0	
Mean	38	12.0	5.90	11.55	8	0	89	1	2	0	
14266F	31	9.7	5.25	13.37	8	0	91	0	1	0	
14269F	34	10.5	5.04	13.63	8	1	89	2	0	0	
14272F	36	11.6	6.38	8.95	10	0	88	2	0	0	
14276F	34	10.5	5.54	9.45	8	1	89	1	1	0	
14278F	30	9.5	5.42	14.55	2	0	95	2	1	0	
14281F	36	12.0	5.63	8.35	10	0	88	1	1	0	
Mean	33	10.6	5.54	11.38	8	0	90	1	1	0	

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 18. Individual and Mean Results of Biochemical Studies During Control Period

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
Control, Female	14142	78		
	14145	78		
	14149	75		
	14153	105		
	14156	93		
	14154	45		
	14144		34	24
	14147		27	24
	14152		29	23
	14155		28	23
	14158		28	23
	14160		30	25
	Mean	79	29	24
Control, Male	14162	99		
	14164	93		
	14166	57		
	14172	93		
	14177	93		
	14179	99		
	14170		29	23
	14168		30	22
	14174		31	24
	14176		27	22
	14180		32	23
	14171		29	26
	Mean	89	30	23
100 ppm., Female	14183	36		
	14188	48		
	14192	39		
	14199	48		
	14182	90		
	14196	45		
	14185		26	22
	14190		29	23
	14193		29	22
	14200		29	25
	14197		29	24
	14195		29	24
	Mean	51	29	23

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.

TABLE 18. Continued. Individual and Mean Results of Biochemical Studies During Control Period.

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
100 ppm., Male	14202	57		
	14209	87		
	14211	63		
	14219	93		
	14214	96		
	14221	36		
	14203		29	23
	14206		27	23
	14212		30	23
	14215		29	23
	14218		26	24
	14217		30	26
Mean		72	29	23
500 ppm., Female	14230	90		
	14224	87		
	14222	84		
	14240	96		
	14235	99		
	14232	90		
	14229		29	24
	14228		25	22
	14223		29	22
	14239		30	22
	14237		28	25
	14234		27	22
Mean		91	28	23
500 ppm., Male	14242	51		
	14245	57		
	14248	54		
	14252	93		
	14254	39		
	14258	87		
	14243		27	22
	14246		29	22
	14250		26	24
	14253		29	22
	14256		27	22
	14259		25	23
Mean		64	27	22

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.**TABLE 18. Continued. Individual and Mean Results of Biochemical Studies During Control Period**

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
2500 ppm., Female	14271	39		
	14266	75		
	14262	57		
	14273	99		
	14274	78		
	14277	69		
	14268		27	22
	14265		32	24
	14263		28	21
	14272		31	24
	14275		28	23
	14280		29	23
Mean		70	29	23
2500 ppm., Male	14282	90		
	14286	90		
	14296	51		
	14283	51		
	14289	93		
	14297	48		
	14287		32	27
	14291		27	25
	14300		26	24
	14285		29	22
	14292		29	23
	14299		27	21
Mean		71	28	24

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.

TABLE 19. Individual and Mean Results of Biochemical Studies at One Month.

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
Control, Female	14143	60	26	24
	14145	84	28	25
	14147	90	25	23
	14149	78	26	25
	14151	96	24	23
	14154	72	28	25
	Mean	80	26	24
Control, Male	14163	72	25	24
	14166	53	24	21
	14169	129	25	24
	14172	63	28	23
	14175	114	27	24
	14178	129	24	24
	Mean	93	26	23
100 ppm., Female	14183	45	26	23
	14186	75	26	24
	14189	117	25	24
	14192	54	25	22
	14195	108	25	23
	14198	114	25	24
	Mean	86	25	23
100 ppm., Male	14203	84	25	24
	14206	129	27	25
	14209	132	27	24
	14212	105	26	23
	14215	105	26	24
	14218	126	25	23
	Mean	114	26	24
500 ppm., Female	14223	52	28	25
	14226	99	28	25
	14229	84	26	23
	14232	117	27	23
	14235	123	28	26
	14238	102	26	25
	Mean	96	27	25

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.

TABLE 19. Continued. Individual and Mean Results of Biochemical Studies at One Month.

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
500 ppm., Male	14243	72	27	23
	14246	132	27	25
	14249	132	26	24
	14252	96	26	24
	14255	87	25	23
	14258	132	25	25
	Mean	109	26	24
2500 ppm., Female	14263	84	28	24
	14266	51	27	24
	14269	60	26	23
	14272	72	28	24
	14275	84	28	24
	14278	45	28	25
	Mean	66	28	24
2500 ppm., Male	14283	72	28	23
	14286	117	27	24
	14289	117	24	23
	14292	69	25	23
	14295	105	26	23
	14298	81	25	24
	Mean	94	26	24

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.

TABLE 20. Individual and Mean Results of Biochemical Studies at Two Months.

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
Control, Female	14144	60	27	21
	14148	73	26	24
	14150	59	25	22
	14151	56	19	22
	14153	67	25	22
	14155	67	26	22
	Mean	64	25	22
Control, Male	14163	54	28	20
	14166	38	28	23
	14169	79	26	23
	14171	98	27	24
	14172	78	24	24
	14173	78	25	22
	Mean	71	26	23
100 ppm., Female	14183	31	24	21
	14186	47	23	23
	14187	58	25	22
	14192	39	24	21
	14195	36	30	22
	14198	37	29	22
	Mean	41	26	22
100 ppm., Male	14203	56	25	24
	14206	36	28	21
	14209	111	27	22
	14211	64	27	22
	14216	33	29	24
	14219	46	29	23
	Mean	58	28	23
1000 ppm., Female	14224	62	26	21
	14227	58	27	22
	14229	64	29	24
	14232	63	26	22
	14235	46	31	22
	14236	27	25	21
	Mean	53	27	22

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.

TABLE 20. Continued. Individual and Mean Results of Biochemical Studies at Two Months.

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
1000 ppm., Male	14242	39	26	23
	14247	45	27	22
	14249	53	29	21
	14254	41	26	23
	14256	38	29	21
	14259	70	28	22
Mean		48	28	22
5000 ppm., Female	14264	64	27	20
	14267	32	27	21
	14269	32	26	21
	14271	36	27	21
	14274	28	29	21
	14277	37	28	22
Mean		40	27	21
5000 ppm., Male	14284	47	26	23
	14289	49	27	21
	14292	82	27	21
	14294	27	27	20
	14296	50	29	24
	14298	88	28	23
Mean		57	27	22

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.

TABLE 21. Individual and Mean Results of Biochemical Studies at Three Months.

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
Control, Female	14144	26	30	23
	14248	59	23	24
	14155	21	26	22
	14157	20	28	22
	14159	31	27	23
	14160	28	28	26
	Mean	31	27	23
Control, Male	14174	24	26	21
	14171	30	26	23
	14173	32	27	22
	14175	79	25	25
	14177	77	27	24
	14180	107	28	27
	Mean	58	27	24
100 ppm., Female	14187	22	25	22
	14189	29	26	23
	14192	18	25	21
	14196	14	22	21
	14198	68	23	22
	14199	32	24	21
	Mean	31	24	22
100 ppm., Male	14204	16	24	22
	14207	25	23	21
	14209	47	26	20
	14211	25	25	21
	14213	35	24	21
	14216	41	22	22
	Mean	32	24	21
1000 ppm., Female	14226	39	23	24
	14229	53	26	24
	14233	73	25	23
	14235	55	25	25
	14237	50	25	22
	14239	22	23	20
	Mean	49	25	23

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.

TABLE 21. Continued. Individual and Mean Results of Biochemical Studies at Three Months.

Group	Rat No.	Alkaline Phosphatase	SGOT ¹	SGPT ²
1000 ppm., Male	14243	41	29	27
	14250	43	25	22
	14254	15	26	19
	14256	26	23	20
	14259	87	23	23
	14261	34	22	22
	Mean	41	25	22
5000 ppm., Female	14264	26	25	22
	14277	19	25	21
	14271	18	25	20
	14274	18	26	22
	14280	26	28	22
	14279	16	25	19
	Mean	21	26	21
5000 ppm., Male	14284	49	27	24
	14286	66	25	24
	14290	37	24	21
	14292	75	24	22
	14296	45	24	22
	14298	33	24	21
	Mean	51	25	22

¹ Serum Glutamic Oxalacetic Transaminase² Serum Glutamic Pyruvic Transaminase

Ninety-Day Feeding Study in the Rat.

BLE 22. Urinalysis Values for Male and Female Rats during Control Period.

Rat No.	Sex	Volume (ml.)	Appear- ance	pH	Specific Gravity	Albu- min	Bili- rubin	Glu- cose	Occ. Blood	WBC	RBC	Microscopic						Cal- cium Ox.	Bact- eria	Blad- der Worn
												Epi. Cells	Amor. Urates	Amm. Urates	Triple Phos.	Cal- cium Ox.	Bact- eria	Blad- der Worn		
<u>Control:</u>																				
143	F	5	S;C	7.0	1.028	N	N	N	N	occ										
146	F	12	LS;c1	6.9	1.030	N	N	N	N								F		F	
150	F	3	S;c1	6.3	1.032	N	N	N	N								F		M	
154	F	5	S;C	6.8	1.032	N	N	N	N								F		M	
157	F	6	S;C	7.0	1.032	N	N	N	N								M		F	
160	F	6	S;C	7.2	1.030	N	N	N	N								F		M	
163	M	21	LS;C	6.5	1.030	N	N	N	N	occ							F		F	
167	M	1	Am;C	6.4	1.063	3+	N	N	N	occ							F		F	
173	M	1	LAm;C	6.2	1.065	N	N	N	N	occ			1-3						F	
175	M	4	S;c1	6.8	1.040	N	N	N	N	occ							F		F	
178	M	2	S;c1	6.4	1.045	N	N	N	N								F		M	
181	M	12	LS;C	9.0	1.030	N	N	N	N								F		F	
<u>ppm.:</u>																				
84	F	6	LS;c1	6.8	1.030	N	N	N	N	occ							F		F	
89	F	7	LS;c1	8.8	1.030	N	N	N	N	occ							F		F	
91	F	4	S;C	6.5	1.030	N	N	N	N	occ							F		F	
94	F	3	S;c1	8.8	1.040	N	N	N	N	occ							M		M	
98	F	13	LS;C	9.0	1.030	N	N	N	N	occ							F		F	
01	F	3	LAm;C	6.8	1.045	N	N	N	N	occ							F		F	
04	M	6	LS;c1	8.5	1.030	N	N	N	N	occ							F		F	
08	M	3	S;C	6.2	1.055	N	N	N	N	occ							F		M	
10	M	2	S;C	6.5	1.042	N	N	N	N	occ							F		F	
05	M	4	S;c1	6.8	1.030	N	N	N	N	occ							F		F	
16	M	4	LS;C	7.0	1.032	N	N	N	N	occ							F		F	
20	M	9	LS;c1	9.0	1.030	N	N	N	N	occ							M		F	

S - Straw
LS - Light Straw
Am - Amber
LAm - Light Amber

C - Clear
c1 - Cloudy

N - Negative
1+ - Trace-to-Slight
2+ - Slight-to-Moderate
3+ - Moderate
4+ - Marked

F - Few
M - Many
occ - Occasional

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

LE 22. Continued. Urinalysis Values for Male and Female Rats during Control Period.

t Sex	Volume (ml.)	Appear- ance	pH	Specific Gravity	Albu- min	Bili- rubin	Glu- cose	Occ. Blood	Microscopic						Cal- cium Ox.	Bact- eria	Blad- der Worm
									WBC	RBC	Epi. Cells	Amor. Urates	Amm. Urates	Triple Phos.			
<u>ppm.:</u>																	
25 F	1	S;C	6.3	1.045	N	N	N	N	occ			F				M	
27 F	3	S;c1	8.8	1.042	N	N	N	N								F	
31 F	3	S;C	6.3	1.045	N	N	N	N								F	
33 F	3	S;c1	8.0	1.040	N	N	N	N								F	
36 F	7	LS;c1	6.5	1.030	N	N	N	N								M	
41 F	3	LAm;C	6.0	1.045	N	N	N	N								F	
44* M	4	S;C	6.2	1.040	N	N	N	N								F	
47 M	4	S;c1	9.0	1.035	N	N	N	N								F	
49 M	5	S;c1	8.3	1.032	N	N	N	N								F	
51 M	4	S;c1	6.7	1.045	N	N	N	N								M	
55 M	6	LS;c1	6.7	1.030	N	N	N	N								M	
57 M	4	S;c1	6.5	1.042	N	N	N	N								M	
<u>0 ppm.:</u>																	
54 F	1	Am;C	6.5	1.065	N	N	N	N	occ			F				M	
57 F	6	S;c1	6.9	1.030	N	N	N	N								F	
59 F	21	LS;C	7.0	1.030	N	N	N	N	occ							occ	
76 F	4	S;c1	7.3	1.030	N	N	N	N								occ	
78 F	4	S;C	7.4	1.033	N	N	N	N								occ	
81 F	2	DS;C	9.0	1.042	N	N	N	N								M	
84 M	2	S;C	7.0	1.048	N	N	N	N								F	
88 M	2	S;c1	9.0	1.053	N	N	N	N								occ	
90 M	5	S;c1	9.0	1.037	N	N	N	N								M	
95 M	10	LS;c1	9.0	1.030	N	N	N	N	occ							M	
98 M	12	S;c1	6.9	1.030	N	N	N	N								M	
11 M	1	Am;C	6.2	1.055	N	N	N	N	occ			occ				M	L

: S - Straw

C - Clear

N - Negative

LS - Light Straw

c1 - Cloudy

1+ - Trace-to-Slight

F - Few

* Occasional uric acid

DS - Dark Straw

2+ - Slight-to-Moderate

M - Many

Am - Amber

3+ - Moderate

L - Loaded

LAm - Light Amber

4+ - Marked

occ - Occasional

Ninety-Day Feeding Study in the Rat.

LE 23. Urinalysis Values for Male and Female Rats at One Month.

t Sex	Volume (ml.)	Appear- ance	pH	Specific Gravity	Albu- min	Bili- rubin	Glu- cose	Occ. Blood	WBC	RBC	Microscopic						Cal- cium Ox.	Bact- eria	Blad- der Worms
											Epi. Cells	Amor. Urates	Amm. Urates	Triple Phos.					
<u>Control:</u>																			
62 M 12 LS;cl 8.5 1.013 N N N N 1-2 F F F F F																			
65 M 12 LS;cl 7.9 1.016 N N N N occ F M M occ M																			
68 M 17 LS;cl 8.9 1.014 N N N N 1-2 M F F M F																			
71 M 4 LS;cl 7.2 1.048 N N N N F F F M M																			
74 M 15 LS;cl 7.0 1.013 N N N N occ M F M F																			
77 M 9 LS;cl 6.9 1.020 N N N N 1-2 F F F F																			
42 F 10 LS;cl 6.5 1.017 N N N N F F F M																			
45 F 7 S;cl 9.0 1.041 N N N N F F M F																			
46 F 15 LS;cl 7.1 1.012 N N N N F F F F																			
48 F 6 DAm;C 8.9 1.031 N N N N 1-2 F F F F																			
50 F 12 LS;cl 6.2 1.011 N N N N occ F F M M																			
53 F 7 S;cl 6.9 1.035 N N N N F F F M																			
<u>ppm.:</u>																			
102 M 7 S;cl 7.0 1.044 N N N N F F F M																			
105 M 26 LS;cl 7.3 1.008 N N N N F F M F																			
108 M 10 S;cl 6.9 1.021 N N N N F F F F																		occ	
111 M 16 LS;cl 9.0 1.009 N N N N occ M M M occ																			
114 M 14 S;cl 6.5 1.013 N N N N 1-2 F F M M																		occ	
117 M 10 S;cl 6.3 1.021 N N N N occ F F F M																			
182 F 4 S;cl 7.0 1.042 N N N N F F L F																		F	
185 F 13 LS;cl 7.1 1.011 N N N N occ F F F F																		F	
188 F 14 LS;cl 9.0 1.007 N N N N F F F F																		F	
191 F 12 LS;cl 6.8 1.016 N N N N F F F M																		M	
194 F 7 S;cl 9.0 1.019 N N N N occ F F M F																		F	
197 F 9 S;cl 6.5 1.017 N N N N occ F F F M																		M	

Legend:

S - Straw

C - Clear

N - Negative

F - Few

LS - Light Straw

cl - Cloudy

1+ - Trace-to-Slight

M - Many

DAm - Dark Amber

2+ - Slight-to-Moderate

L - Loaded

3+ - Moderate

occ - Occasional

4+ - Marked

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 23. Continued. Urinalysis Values for Male and Female Rats at One Month.

Rat No.	Sex	Volume (ml.)	Appear-ance	pH	Specific Gravity	Albu-min	Bili-rubin	Glu-cose	Occ. Blood	WBC	RBC	Microscopic						Cal-cium Ox.	Bact-eria	Blad-der Worms
												Epi. Cells	Amor. Urates	Amm. Urates	Triple Phos.	Microscopic				
<u>500 ppm.:</u>																				
14242	M	12	LS;cl	7.1	1.012	N	N	N	N							F		F		
14245	M	10	LS;cl	9.0	1.023	N	N	N	N							F	M	F		
14248	M	12	LS;cl	9.0	1.011	N	N	N	N							F	F	M		
14251	M	13	LS;cl	6.1	1.015	N	N	N	N							F	F	M		
14254	M	16	LS;cl	6.8	1.011	N	N	N	N							F	F	M		
14257	M	17	LS;cl	8.9	1.012	N	N	N	N							F	M	M		
14222	F	8	S;cl	6.5	1.024	N	N	N	N							F	F	M		
14225	F	4	S;cl	6.5	1.048	N	N	N	N							F	F	F		
14228	F	6	S;cl	6.6	1.034	N	N	N	N							F	F	F		
14231	F	14	S;cl	7.2	1.012	N	N	N	N							F	M	F		
14234	F	3	DS;cl	6.1	1.050	N	N	N	N							F	F	F		
14237	F	16	LS;cl	8.8	1.010	N	N	N	N							F	L	F		
<u>2500 ppm.:</u>																				
14282	M	14	LS;C	7.1	1.023	N	N	N	N							F	M	F		
14285	M	7	LS;cl	7.3	1.035	N	N	N	N							F	F	F		
14288	M	17	LS;cl	8.8	1.015	N	N	N	N							L	F	occ		
14291	M	14	LS;cl	9.0	1.012	N	N	N	N							F	F	occ		
14294	M	4	DS;cl	8.9	1.042	N	N	N	N							M	F	F		
14297	M	17	S;cl	6.9	1.014	N	N	N	N							F	F	occ		
14262	F	4	S;cl	7.0	1.044	N	N	N	N							F		F		
14265	F	4	S;cl	6.1	1.040	N	N	N	N							F	M			
14268	F	6	S;cl	6.5	1.025	N	N	N	N							F	F	F		
14271	F	15	LS;cl	7.0	1.011	N	N	N	N							F	F	M		
14274	F	14	S;cl	6.7	1.013	N	N	N	N							F	M	M		
14277	F	8	S;cl	7.1	1.017	N	N	N	N							F	M	M		

Code: S - Straw C - Clear N - Negative F - Few
 LS - Light Straw cl - Cloudy 1+ - Trace-to-Slight M - Many
 DS - Dark Straw 2+ - Slight-to-Moderate L - Loaded
 [REDACTED] 3+ - Moderate occ - Occasional
 4+ - Marked

Ninety-Day Feeding Study in the Rat.

TABLE 24. Urinalysis Values for Male and Female Rats at Two Months.

Rat No.	Sex	Volume (ml.)	Appear-ance	pH	Specific Gravity	Albu-min	Bili-rubin	Glu-cose	Occ. Blood	WBC	RBC	Microscopic			Cal-cium	Bact-eria	Blad-der Worms
												Epi. Cells	Amor. Urates	Amm. Urates			
<u>Control:</u>																	
14164	M	28	LS;cl	7.0	1.015	N	N	N	N						M	M	M
14167	M	16	LS;cl	7.1	1.022	N	N	N	N						M	F	M
14170	M	12	LS;cl	7.0	1.028	N	N	N	N						M	F	M
14174	M	25	LS;cl	9.0	1.014	N	N	N	N						F		F
14178	M	24	LS;cl	7.5	1.012	N	N	N	N						M	F	M
14181	M	30	LS;cl	8.0	1.009	N	N	N	N						F	F	M
14143	F	6	LS;cl	7.5	1.030	N	N	N	N						F	F	M
14147	F	13	LS;C	7.7	1.022	N	N	N	N						F	M	M
14149	F	6	S;cl	9.0	1.030	N	N	N	N						F	M	F
14152	F	11	LS;cl	9.0	1.024	N	N	N	N						F	L	F
14154	F	3	S;C	6.2	1.065	N	N	N	N						occ	M	F
14158	F	4	S;C	6.0	1.047	N	N	N	N						F	F	F
<u>100 ppm.:</u>																	
14204	M	30	LS;C	7.8	1.016	N	N	N	N						M	M	F
14210	M	18	LS;cl	8.8	1.022	N	N	N	N						F	F	M
14213	M	21	LS;cl	9.0	1.016	N	N	N	N						F	F	F
14217	M	17	S;cl	9.0	1.015	N	N	N	N						F	F	F
14220	M	30	LS;cl	8.0	1.008	N	N	N	N						F	F	M
14221	M	23	LS;cl	9.0	1.011	N	N	N	N						F	F	F
14184	F	4	S;cl	7.5	1.044	N	N	N	N	occ					M	M	F
14190	F	20	LS;cl	8.4	1.008	N	N	N	N						F	M	F
14193	F	24	LS;cl	6.4	1.006	N	N	N	N						M	occ	M
14194	F	6	S;cl	9.0	1.028	N	N	N	N						M	F	M
14196	F	5	S;cl	6.8	1.028	N	N	N	N						F	F	M
14200	F	8	S;cl	6.2	1.030	N	N	N	N						F		F

Code: S - Straw C - Clear N - Negative F - Few
 LS - Light Straw cl - Cloudy 1+ - Trace-to-Slight M - Many
 2+ - Slight-to-Moderate L - Loaded
 3+ - Moderate occ - Occasional
 4+ - Marked

Ninety-Day Feeding Study in the Rat.

TABLE 24. Continued. Urinaysis Values for Male and Female Rats at Two Months.

Rat No.	Sex	Volume (ml.)	Appear-ance	pH	Specific Gravity	Albu-min	Bili-rubin	Glu-cose	Occ. Blood	WBC	RBC	Microscopic				Cal-cium	Bact-eria	Blad-der Worms
												Epi-Cells	Amor. Urates	Amm. Urates	Triple Phos.			
<u>1000 ppm.:</u>																		
14243	M	24	LS;cl	9.0	1.013	N	N	N	N			F	F	F		F		F
14246	M	16	LS;cl	6.8	1.017	N	N	N	N				F	M			F	
14251	M	12	LS;cl	6.0	1.026	N	N	N	N				F	F			F	
14253	M	30	LS;C	7.8	1.010	N	N	N	1+				F	F			M	
14257	M	26	LS;cl	7.2	1.013	N	N	N	N				F	F			M	
14261	M	23	LS;cl	7.2	1.015	N	N	N	N				F	F			F	
14223	F	11	S;cl	7.2	1.013	N	N	N	N			F	M	occ		M		
14226	F	10	S;cl	9.0	1.030	N	N	N	N				F	F	M		F	
14230	F	12	LS;cl	8.8	1.016	N	N	N	N				F	F	F		M	
14234	F	7	S;cl	6.4	1.023	N	N	N	N			F	F	F		M		
14237	F	14	LS;C	7.5	1.010	N	N	N	N				F	F	F		F	
14240	F	15	LS;cl	7.8	1.009	N	N	N	N				F	M			M	
<u>5000 ppm.:</u>																		
14283	M	14	LS;cl	9.0	1.021	N	N	N	N					M	F		F	F
14289	M	27	LS;cl	9.0	1.013	N	N	N	N				F		F		F	
14293	M	10	S;cl	9.0	1.034	N	N	N	N				F	F	F		F	
14295	M	40	LS;cl	9.0	1.006	N	N	N	N				F	F	F		F	M
14297	M	27	LS;cl	9.0	1.012	N	N	N	N				F	F	F		F	F
14300	M	23	LS;cl	6.7	1.010	N	N	N	N				F	M			F	F
14263	F	12	S;cl	7.0	1.020	N	N	N	N				F	F	F		F	
14270	F	10	S;cl	7.2	1.017	N	N	N	N				occ	F	F		F	
14273	F	14	LS;cl	9.0	1.013	N	N	N	N				F	M	M		F	
14275	F	5	Am;cl	8.5	1.024	N	N	N	N			F	M	M		M		
14279	F	8	S;C	6.0	1.026	N	N	N	N				F	F	F		F	
14281	F	4	S;C	8.2	1.028	N	N	N	N				F	F	F		F	

Code: S - Straw C - Clear N - Negative F - Few
 LS - Light Straw cl - Cloudy 1+ - Trace-to-Slight M - Many
 Am - Amber 2+ - Slight-to-Moderate L - Loaded
 3+ - Moderate occ - Occasional
 4+ - Marked

Ninety-Day Feeding Study in the Rat.

TABLE 25. Urinalysis Values for Male and Female Rats at Three Months.

Rat No.	Sex	Volume (ml.)	Appear-ance	pH	Specific Gravity	Albu-min	Bili-rubin	Glu-cose	Occ. Blood	WBC	RBC	Microscopic				Cal-cium Ox.	Bact-eria	Blad-der Worms
												Epi. Cells	Amor. Urates	Amm. Urates	Triple Phos.			
<u>Control:</u>																		
14164	M	8	LS;cl	6.8	1.053	N	N	N	N				F		M		M	F
14169	M	7	S;cl	7.3	1.055	N	N	N	N				F		M		F	F
14172	M	11	LS;cl	9.0	1.035	N	N	N	N				F		F		M	F
14176	M	5	S;cl	6.5	1.066	N	N	N	N			1-2		F	M		F	F
14179	M	4	S;cl	7.8	1.058	N	N	N	N				F		M		F	F
14181	M	7	S;cl	6.9	1.052	N	N	N	N				F		M		F	F
14147	F	1	S;C	6.1	1.080	N	N	N	N					F	F			F
14151	F	2	S;C	6.3	1.069	N	N	N	N					F	M			F
14154	F	2	S;cl	7.4	1.065	N	N	N	N			occ		F	M		M	
14156	F	2	S;cl	6.1	1.065	N	N	N	N				F		F		F	
14158	F	1	S;C	6.0	1.080	N	N	N	N			1-2		F	F		F	
14161	F	2	S;C	6.7	1.065	N	N	N	N	occ		occ		F		M		F
<u>100 ppm.:</u>																		
14203	M	7	S;cl	6.7	1.058	N	N	N	N					F	F	F		M
14206	M	7	LS;cl	7.0	1.048	N	N	N	N				F		F		M	
14210	M	6	S;cl	9.0	1.055	N	N	N	N			2-3			F		F	F
14215	M	3	DS;cl	6.0	1.080	N	N	N	N					F	F		M	F
14218	M	9	S;cl	9.0	1.045	N	N	N	N					F	F		F	F
14219	M	6	LS;cl	6.3	1.049	N	N	N	N			occ			M		F	
14183	F	1	S;C	6.0	1.080	N	N	N	N					F	F			F
14186	F	6	LS;cl	8.0	1.045	N	N	N	N					F	L			F
14190	F	6	S;cl	7.0	1.035	N	N	N	N			1-2	F		F		M	
14195	F	6	LS;cl	6.2	1.035	N	N	N	N				F		F		M	
14197	F	1	S;C	7.7	1.072	N	N	N	N					M		F		F
14200	F	2	S;cl	6.0	1.065	N	N	N	N	occ				F		M		F

Code: S - Straw C - Clear N - Negative F - Few
 LS - Light Straw cl - Cloudy 1+ - Trace-to-Slight M - Many
 DS - Dark Straw 2+ - Slight-to-Moderate L - Loaded
[REDACTED] 3+ - Moderate occ - Occasional
 4+ - Marked

(**[REDACTED]**) Ninety-Day Feeding Study in the Rat.

TABLE 25. Continued. Urinalysis Values for Male and Female Rats at Three Months.

Rat No.	Sex	Volume (ml.)	Appear-ance	pH	Specific Gravity	Albu-min	Bili-rubin	Glu-cose	Occ. Blood	WBC	RBC	Microscopic				Cal-cium Ox.	Bact-eria	Blad-der Worms
												Epi. Cells	Amor. Urates	Amm. Urates	Triple Phos.			
<u>1000 ppm.:</u>																		
14244	M	10	LS;cl	7.0	1.035	N	N	N	3+*			occ			F	F	M	F
14247	M	6	S;cl	6.8	1.057	N	N	N	N						F	F	M	F
14252	M	5	S;cl	6.6	1.065	N	N	N	N			2-3			F	F	F	F
14255	M	4	S;C	6.0	1.065	N	N	N	N				occ	F	F	F	F	F
14257	M	10	LS;cl	9.0	1.037	N	N	N	N			2-3			F	M	M	M
14260	M	3	S;cl	6.7	1.073	N	N	N	N				1-2		F	M	F	
14224	F	5	S;cl	9.0	1.045	N	N	N	N						F	F	M	
14227	F	2	S;C	6.7	1.068	N	N	N	N					F		F	F	
14232	F	3	S;cl	5.9	1.057	N	N	N	N			occ			F	F	M	
14236	F	2	S;C	6.0	1.075	N	N	N	N			1-2		F	F	F	F	
14238	F	2	S;cl	6.5	1.065	N	N	N	N						F	F	F	
14240	F	1	S;C	6.2	1.078	N	N	N	N						F	F	F	
<u>5000 ppm.:</u>																		
14283	M	2	Am;C1	6.2	1.075	N	N	N	N	occ				F	F	F	F	
14287	M	4	S;cl	6.8	1.073	N	N	N	N					F	F	F	F	
14291	M	6	S;cl	8.8	1.045	2+	N	N	N						F	M	M	F
14294	M	2	DS;cl	7.7	1.080	N	N	N	N						F	M	F	F
14297	M	4	DS;C	6.1	1.075	N	N	N	N				occ		F	F	F	F
14300	M	4	S;cl	6.8	1.065	N	N	N	N					F	F	F	F	M
14266	F	1	S;C	7.0	1.080	N	N	N	N						F	F	F	F
14269	F	2	S;cl	6.2	1.068	N	N	N	N	occ					F	M	F	F
14272	F	1	DS;C	5.8	1.065	N	N	N	N				occ	F	F	M	F	
14276	F	1	DS;C	6.6	1.065	N	N	N	N				1-2		F	M	F	
14278	F	2	S;C	6.3	1.065	N	N	N	N			1-2			F	M	F	
14281	F	1	DS;C	6.0	1.080	N	N	N	N	1-2				F		F	M	
Code:	S - Straw LS - Light Straw DS - Dark Straw Am - Amber	C - Clear cl - Cloudy	N - Negative 1+ - Trace-to-Slight 2+ - Slight-to-Moderate 3+ - Moderate 4+ - Marked	F - Few M - Many L - Loaded occ - Occasional * Repeat 3+														Page 60

() Ninety-Day Feeding Study in the Rat.

TABLE 26. Necropsy Observations. Thirty-Day Interim Sacrifice.

Animal Number	Sex	Organ	Comment
<u>Rats were normal except as noted below:</u>			
<u>Control:</u>			
14165	M	thymus	Few petechial hemorrhages.
14146	F	uterus	Mild hydrouterus.
<u>100 ppm.:</u>			
14202	M	lung	Moderate pneumonia.
14208	M	lung	Mild pneumonia.
14185	F	uterus	Mild hydrouterus.
<u>2500 ppm.:</u>			
14288	M	spleen	Slightly enlarged.
14262	F	spleen	Slightly enlarged.

(b) Ninety-Day Feeding Study in the Rat.

TABLE 26. Continued. Necropsy Observations. Sixty-Day Interim Sacrifice.

Animal Number	Sex	Organ	Comment
<u>Rats were normal except as noted below:</u>			
<u>Control:</u>			
14149	F	lung	Few scattered gray areas.
<u>100 ppm.:</u>			
14221	M	liver lung	Pale. Gray pinpoint areas scattered throughout.
<u>5000 ppm.:</u>			
14289	M	liver testes	Slightly pale. Left testis approximately twice the size of right.
14293	M	liver	Pale.
14295	M	liver	Pale yellow in color.

(b) Ninety-Day Feeding Study in the Rat.

TABLE 26. Continued. Necropsy Observations. Ninety-Day Terminal Sacrifice.

Animal Number	Sex	Organ	Comment
<u>Rat were normal except as noted below:</u>			
<u>Control:</u>			
14175	M	lung	Mild pneumonia.
14153	F	lung	Mild pneumonia.
<u>100 ppm.:</u>			
14214	M	lung	Mild pneumonia.
<u>1000 ppm.:</u>			
14252	M	liver	Slightly yellowish.
14254	M	lung	Mild pneumonia.
14227	F	abdominal cavity	6 mm. firm hemorrhagic area in abdominal fat.
14233	F	lung	Mild pneumonia.
14237	F	lung	Mild pneumonia.
<u>5000 ppm.:</u>			
14284	M	liver	Slight yellowish cast.
14286	M	lung	Mild pneumonia.
14291	M	liver	Slight yellowish cast.
14294	M	liver	Slight yellowish cast.
14297	M	liver	Slight yellowish cast.
14266	F	lung	Moderate pneumonia and bronchiectasis.
14274	F	kidney	Hydronephrosis, right kidney.

([REDACTED]) Ninety-Day Feeding Study in the Rat.

TABLE 26. Continued. Necropsy Observations. 21-Day Compound Withdrawal.

Animal Number	Sex	Organ	Comment
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Rats were normal except as noted below:

5000 ppm.:

14299	M	liver	Slightly pale.
14300	M	liver	Slightly pale.

Ninety-Day Feeding Study in the Rat.

TABLE 27. Mean Actual (Grams) and Relative (% Body Weight) Organ Weights.

Dietary Level	Sex	Terminal Body Wt. Gm.	Spleen Gm.	Spleen %	Liver Gm.	Liver %	Adrenals Gm.	Adrenals %	Kidneys Gm.	Kidneys %	Testes/ Ovaries Gm.	%
<u>30-Day Interim Sacrifice:</u>												
0	M	315	0.97	0.308	14.11	4.479	0.039	0.010	2.66	0.844	2.99	0.949
0	F	202	0.70	0.347	8.74	4.327	0.069	0.034	1.73	0.856	0.089	0.040
100	M	268	0.70	0.261	11.65	4.347	0.044	0.020	2.22	0.828	2.69	1.003
100	F	212	0.69	0.326	7.28	3.434	0.054	0.025	1.56	0.736	0.092	0.040
500	M	243	0.62	0.255	10.06	4.136	0.037	0.015	2.30	0.946	2.74	1.127
500	F	188	0.47	0.250	8.26	4.394	0.054	0.029	1.86	0.990	0.097	0.050
2500	M	277	1.12	0.404	15.68	5.661	0.044	0.016	2.80	1.011	2.74	0.989
2500	F	173	0.59	0.341	8.65	5.000	0.068	0.039	1.85	1.069	0.123	0.070
<u>60-Day Interim Sacrifice:</u>												
0	M	355	0.76	0.214	13.02	3.668	0.062	0.017	2.62	0.738	3.07	0.865
0	F	233	0.52	0.22	8.25	3.541	0.070	0.030	1.72	0.738	0.133	0.060
100	M	338	0.79	0.234	10.91	3.228	0.048	0.014	2.53	0.749	3.30	0.976
100	F	230	0.52	0.226	8.00	3.478	0.065	0.028	1.70	0.739	0.132	0.060
1000	M	355	0.74	0.208	12.94	3.645	0.046	0.013	2.70	0.761	3.08	0.868
1000	F	210	0.54	0.257	7.89	3.757	0.075	0.036	1.92	0.914	0.162	0.080
5000	M	412	0.90	0.218	21.71	5.269	0.071	0.017	3.46	0.840	3.82	0.927
5000	F	232	0.62	0.267	12.04	5.190	0.067	0.029	2.36	1.017	0.145	0.060
<u>90-Day Terminal Sacrifice:</u>												
0	M	495	1.08	0.218	14.12	2.853	0.066	0.013	2.87	0.580	3.32	0.670
0	F	270	0.71	0.263	8.17	3.026	0.075	0.028	1.73	0.641	0.154	0.057
100	M	469	1.14	0.243	14.19	3.026	0.057	0.012	2.95	0.629	3.39	0.723
100	F	284	0.81	0.285	8.27	2.912	0.071	0.025	1.87	0.658	0.171	0.060
1000	M	452	0.97	0.215	15.02	3.323	0.060	0.013	3.05	0.675	3.39	0.750
1000	F	284	0.77	0.271	10.59	3.729	0.087	0.031	2.30	0.810	0.155	0.055
5000	M	425	0.98	0.231	20.38	4.795	0.057	0.013	3.33	0.783	3.37	0.793
5000	F	237	0.81	0.342	10.95	4.620	0.072	0.030	2.25	0.949	0.142	0.060
<u>21-Day Compound Withdrawal:</u>												
0	M	490	0.70	0.143	14.82	3.024	0.056	0.014	2.97	0.606	3.36	0.686
0	F	297	0.56	0.189	9.17	3.087	0.073	0.025	2.09	0.704	0.224	0.080
1000	M	507	0.91	0.179	17.41	3.434	0.065	0.013	3.36	0.663	3.59	0.709
1000	F	287	0.61	0.213	9.35	3.258	0.077	0.027	2.25	0.784	0.177	0.060
5000	M	440	0.61	0.139	16.55	3.761	0.058	0.013	3.18	0.723	3.32	0.755
5000	F	277	0.57	0.206	10.75	3.881	0.083	0.030	2.45	0.884	0.162	0.060

Thymus		Heart		Lung		Thyroid		Brain		Pituitary	
Gm.	%	Gm.	%	Gm.	%	Gm.	%	Gm.	%	Gm.	%
0.90	0.286	1.15	0.365	1.63	0.517	0.023	0.007	1.86	0.591	0.009	0.003
0.68	0.337	0.78	0.386	1.32	0.653	0.021	0.010	1.79	0.886	0.007	0.003
0.73	0.272	0.98	0.366	1.56	0.582	0.027	0.010	1.74	0.649	0.009	0.003
0.47	0.222	0.69	0.325	1.25	0.590	0.018	0.008	1.74	0.820	0.009	0.004
0.67	0.276	0.94	0.386	1.58	0.650	0.024	0.010	1.84	0.757	0.008	0.003
0.71	0.378	0.77	0.410	1.28	0.681	0.024	0.013	1.74	0.926	0.008	0.004
0.74	0.267	1.06	0.383	1.65	0.596	0.018	0.006	1.96	0.708	0.006	0.002
0.59	0.341	0.68	0.393	1.34	0.774	0.018	0.010	1.80	1.040	0.004	0.002
<hr/>											
0.64	0.180	1.41	0.397	1.91	0.538	0.026	0.007	1.61	0.454	0.014	0.004
0.57	0.244	0.86	0.369	1.16	0.498	0.024	0.010	1.79	0.768	0.011	0.005
0.79	0.234	1.17	0.346	1.70	0.503	0.027	0.008	1.88	0.556	0.010	0.003
0.50	0.217	0.76	0.330	1.44	0.626	0.036	0.016	1.75	0.761	0.012	0.005
0.66	0.186	1.09	0.307	1.92	0.501	0.022	0.007	2.00	0.563	0.010	0.003
0.56	0.267	0.81	0.386	1.41	0.671	0.033	0.016	1.87	0.890	0.010	0.005
0.90	0.218	1.36	0.330	2.06	0.500	0.030	0.007	1.98	0.481	0.012	0.003
0.56	0.241	0.85	0.366	1.34	0.578	0.025	0.011	1.86	0.802	0.013	0.006
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0.66	0.130	1.37	0.277	2.02	0.408	0.028	0.006	1.92	0.388	0.014	0.003
0.51	0.189	0.84	0.311	1.37	0.507	0.025	0.009	1.82	0.674	0.013	0.005
0.64	0.136	1.42	0.303	2.11	0.450	0.027	0.006	1.99	0.424	0.011	0.002
0.52	0.183	0.87	0.306	1.40	0.493	0.024	0.008	1.87	0.658	0.013	0.005
0.59	0.131	1.32	0.292	2.08	0.460	0.028	0.006	1.96	0.434	0.013	0.003
0.50	0.176	0.98	0.345	1.48	0.521	0.031	0.011	1.89	0.665	0.013	0.005
0.66	0.155	1.29	0.304	1.91	0.449	0.025	0.006	2.00	0.471	0.010	0.002
0.50	0.211	0.85	0.359	1.54	0.650	0.022	0.009	1.85	0.781	0.010	0.004
<hr/>											
0.79	0.161	1.32	0.269	2.47	0.504	0.035	0.007	2.07	0.422	0.010	0.002
0.52	0.175	0.89	0.300	1.53	0.515	0.026	0.009	1.87	0.630	0.012	0.004
0.84	0.166	1.51	0.298	2.29	0.452	0.036	0.007	2.12	0.418	0.014	0.003
0.58	0.202	0.84	0.293	1.63	0.568	0.029	0.010	1.95	0.680	0.014	0.005
0.67	0.152	1.28	0.291	1.82	0.414	0.030	0.007	2.01	0.457	0.012	0.003
0.62	0.224	0.93	0.336	1.60	0.578	0.030	0.010	1.90	0.686	0.012	0.005

Ninety-Day Feeding Study in the Rat.

TABLE 28. Organ Weights, Grams

Animal No. & Group	Terminal Weight Grams	Sex	Spleen	Liver	Adrenals	Kidneys	Testes/ Ovaries	Thymus	Heart	Lung	Thyroid	Brain	Pituitary
<u>30-DAY INTERIM SACRIFICE:</u>													
<u>Control:</u>													
14162	M	270	1.09	12.02	0.024	2.35	3.06	0.75	0.90	1.44	0.020	1.84	0.007
14165	M	360	0.92	17.02	0.051	3.11	2.81	0.93	1.43	1.68	0.024	1.83	0.010
14168	M	315	0.89	13.30	0.043	2.52	3.10	1.01	1.12	1.76	0.025	1.92	0.008
14142	F	205	0.52	8.63	0.079	1.79	0.084	0.79	0.79	1.30	0.022	8.80	0.008
14145	F	175	0.99	8.11	0.056	1.50	0.063	0.53	0.71	1.22	0.020	1.78	0.006
14146	F	225	0.60	9.49	0.071	1.91	0.120	0.71	0.85	1.45	0.021	1.80	0.007
<u>100 ppm.:</u>													
14202	M	275	0.94	12.51	0.044	2.39	2.76	0.81	0.93	1.84	0.025	1.90	0.009
14205	M	300	0.67	13.42	0.050	2.41	3.11	0.69	1.07	1.47	0.027	1.72	0.008
14208	M	230	0.50	9.02	0.038	1.86	2.19	0.70	0.93	1.37	0.029	1.61	0.010
14182	F	280	0.57	7.75	0.060	1.61	0.110	0.60	0.72	1.30	0.030	1.70	0.010
14185	F	190	1.10	7.81	0.053	1.67	0.092	0.41	0.65	1.36	0.012	1.72	0.010
14188	F	165	0.40	6.28	0.048	1.42	0.075	0.39	0.70	1.08	0.012	1.79	0.007
<u>500 ppm.:</u>													
14242	M	225	0.49	9.49	0.028	2.16	2.83	0.50	0.99	1.76	0.033	1.73	0.006
14245	M	270	0.79	11.02	0.046	2.52	2.82	0.93	1.03	1.60	0.023	2.00	0.010
14248	M	235	0.59	9.66	0.036	2.21	2.56	0.58	0.79	1.38	0.016	1.78	0.007
14222	F	205	0.50	9.20	0.052	1.96	0.084	0.80	0.81	1.31	0.028	1.71	0.007
14225	F	160	0.40	7.08	0.051	1.59	0.083	0.45	0.70	1.14	0.026	1.71	0.007
14228	F	200	0.50	8.51	0.060	2.04	0.123	0.87	0.80	1.38	0.018	1.79	0.009
<u>2500 ppm.:</u>													
14282	M	255	0.71	14.75	0.061	2.49	2.29	0.65	0.96	1.46	0.026	1.93	0.005
14285	M	290	0.90	15.29	0.051	2.90	2.83	0.88	1.02	1.40	0.019	2.01	0.006
14288	M	285	1.76	16.99	0.019	3.00	3.10	0.70	1.20	2.08	0.010	1.94	0.007
14262	F	195	0.99	10.35	0.079	2.12	0.100	0.67	0.76	1.41	0.021	1.81	0.003
14265	F	170	0.47	7.78	0.056	1.70	0.117	0.61	0.65	1.14	0.013	1.75	0.002
14268	F	155	0.32	7.82	0.068	1.74	0.153	0.50	0.63	1.47	0.020	1.83	0.006

Ninety-Day Feeding Study in the Rat.

TABLE 28. Continued. Organ Weights, Grams.

Animal No. & Group	Terminal Weight Grams	Sex	Spleen	Liver	Adrenals	Kidneys	Testes/ Ovaries	Thymus	Heart	Lung	Thyroid	Brain	Pituitary
<u>21-DAY COMPOUND WITHDRAWAL:</u>													
<u>Control:</u>													
14177	M	420	0.60	11.80	0.050	2.67	3.30	0.58	1.18	2.43	0.030	2.21	0.010
14179	M	520	0.65	14.98	0.064	3.02	3.29	0.88	1.41	2.23	0.034	2.07	0.010
14180	M	530	0.85	17.68	0.055	3.22	3.50	0.90	1.38	2.75	0.042	1.93	0.010
14158	F	280	0.42	8.48	0.071	1.98	0.185	0.41	0.93	1.57	0.041	1.80	0.011
14159	F	320	0.53	9.34	0.072	2.15	0.248	0.64	0.90	1.50	0.018	1.92	0.010
14161	F	290	0.73	9.70	0.075	2.15	0.239	0.51	0.85	1.52	0.020	1.90	0.014
<u>1000 ppm.:</u>													
14258	M	560	1.05	18.65	0.064	3.65	3.80	0.90	1.70	2.23	0.035	2.15	0.014
14259	M	470	0.63	17.40	0.068	3.20	3.55	0.83	1.41	2.30	0.034	2.00	0.015
14260	M	490	1.05	16.17	0.062	3.23	3.41	0.80	1.41	2.34	0.038	2.22	0.012
14238	F	280	0.68	8.90	0.081	2.26	0.180	0.52	0.80	2.11	0.027	1.98	0.015
14239	F	290	0.57	9.63	0.069	2.40	0.192	0.61	0.91	1.42	0.023	1.81	0.010
14240	F	290	0.59	9.52	0.081	2.09	0.160	0.60	0.82	1.35	0.037	2.06	0.017
<u>5000 ppm.:</u>													
14298	M	340	0.55	11.10	0.051	2.80	3.32	0.58	1.05	1.64	0.018	2.01	0.012
14299	M	535	0.78	22.95	0.074	3.75	3.40	0.75	1.60	2.09	0.044	2.13	0.014
14300	M	445	0.50	15.61	0.048	2.98	3.25	0.68	1.20	1.72	0.028	1.90	0.010
14278	F	280	0.57	11.10	0.087	2.30	0.124	0.61	0.88	1.70	0.029	1.78	0.009
14279	F	260	0.53	10.13	0.085	2.52	0.160	0.60	0.92	1.32	0.034	1.93	0.014
14280	F	290	0.62	11.01	0.077	2.52	0.203	0.65	1.00	1.78	0.028	1.98	0.013

Ninety-Day Feeding Study in the Rat.

TABLE 28. Continued. Organ Weights, Grams.

Animal No. & Group	Terminal Weight Grams	Testes/ Ovaries Thymus Heart Lung Thyroid Brain Pituitary											
		Sex	Spleen	Liver	Adrenals	Kidneys							
60-DAY INTERIM SACRIFICE:													
Control:													
14167	M	340	0.81	13.13	0.058	2.60	3.14	0.69	1.16	1.67	0.027	1.81	0.014
14170	M	385	0.71	14.70	0.069	2.90	2.89	0.70	1.48	2.03	0.027	1.20	0.017
14178	M	340	0.75	11.24	0.059	2.36	3.19	0.52	1.58	2.02	0.025	1.81	0.011
14143	F	200	0.49	7.28	0.059	1.55	0.170	0.49	0.75	1.07	0.015	1.87	0.01
14149	F	260	0.47	8.88	0.071	1.90	0.100	0.69	0.98	1.22	0.031	1.74	0.009
14152	F	240	0.59	8.58	0.080	1.71	0.130	0.53	0.84	1.19	0.027	1.75	0.014
100 ppm.:													
14217	M	325	0.79	11.78	0.051	2.69	3.32	0.83	1.13	1.60	0.037	2.01	0.010
14220	M	340	0.79	10.52	0.053	2.31	3.31	0.96	1.22	1.81	0.025	1.71	0.009
14221	M	350	0.79	10.44	0.041	2.59	3.27	0.59	1.15	1.69	0.019	1.92	-
14184	F	215	0.41		0.062	1.61	0.144	0.45	0.70	1.15	0.044	1.79	0.012
14193	F	235	0.54	8.29	0.064	1.66	0.135	0.47	0.80	1.78	0.023	1.73	0.013
14194	F	240	0.61	7.70	0.069	1.82	0.118	0.58	0.78	1.38	0.042	1.73	0.010
1000 ppm.:													
14246	M	320	0.62	11.75	0.050	2.57	2.70	0.60	1.12	1.95	0.024	1.91	0.010
14251	M	360	0.79	14.00	0.048	3.09	3.17	0.62	1.11	1.81	0.029	1.99	0.012
14253	M	385	0.81	13.08	0.041	2.45	3.37	0.77	1.05	2.01	0.014	2.09	0.008
14223	F	215	0.55	8.24	0.081	1.89	0.138	0.58	0.89	1.40	0.042	1.82	0.010
14230	F	220	0.65	8.01	0.076	2.01	0.200	0.50	0.88	1.62	0.038	1.90	0.009
14234	F	195	0.41	7.42	0.068	1.85	0.149	0.60	0.66	1.21	0.018	1.90	0.010
5000 ppm.:													
14289	M	450	0.71	26.05	0.070	3.49	1.69, 2.95	1.00	1.40	1.89	0.029	1.90	0.014
14293	M	355	1.34	16.75	0.067	3.33	3.32	0.91	1.38	2.19	0.036	1.96	0.013
14295	M	430	0.66	22.33	0.075	3.56	3.49	0.78	1.29	2.11	0.025	2.08	0.009
14263	F	265	0.50	13.71	0.074	2.46	0.168	0.68	0.87	1.29	0.021	1.80	0.019
14270	F	200	0.55	10.29	0.063	2.20	0.079	0.50	0.80	1.44	0.033	1.88	0.012
14275	F	230	0.80	12.11	0.065	2.41	0.188	0.50	0.89	1.30	0.022	1.90	0.007

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 28. Continued. Organ Weights, Grams.

Animal No. & Group	Terminal Sex	Weight Grams	Spleen	Liver	Adrenals	Kidneys	Testes/ Ovaries	Thymus	Heart	Lung	Thyroid	Brain	Pituitary
<u>90-DAY TERMINAL SACRIFICE:</u>													
<u>Control:</u>													
14163	M	410	1.10	11.63	0.061	2.29	2.80	0.52	1.22	2.00	0.040	1.88	0.009
14164	M	545	1.22	17.92	0.059	3.71	3.58	1.09	1.90	2.38	0.051	2.02	0.017
14166	M	420	0.91	12.83	0.053	2.51	3.22	0.43	1.13	1.64	0.019	1.88	0.014
14169	M	460	1.11	14.18	0.063	3.10	3.65	0.71	1.23	1.78	0.036	2.01	0.012
14171	M	430	1.32	13.81	0.066	2.79	3.37	0.59	1.40	2.09	0.021	1.81	0.014
14172	M	490	1.10	15.47	0.078	3.10	3.19	0.95	1.38	2.07	0.024	1.91	0.013
14173	M	800	0.99	11.91	0.058	2.39	3.15	0.41	1.12	2.03	0.020	1.80	0.014
14174	M	450	1.00	15.12	0.080	3.02	3.31	0.69	1.38	1.60	0.019	1.85	0.015
14175	M	545	1.28	17.71	0.065	3.12	3.49	0.60	1.58	2.92	0.026	2.00	0.015
14176	M	400	0.75	10.48	0.081	2.65	3.42	0.58	1.39	1.68	0.025	2.08	0.012
14144	F	325	1.00	9.90	0.096	2.49	0.242	0.60	1.05	1.71	0.031	1.85	0.014
14147	F	255	0.51	7.11	0.065	1.52	0.134	0.52	0.80	1.00	0.015	1.70	0.013
14148	F	280	0.76	8.62	0.060	1.70	0.155	0.39	0.71	1.35	0.024	1.80	0.013
14150	F	300	0.75	9.80	0.084	1.92	0.167	0.51	0.98	1.52	0.031	1.92	0.013
14151	F	250	0.71	7.50	0.051	1.61	0.104	0.60	0.75	1.21	0.031	1.65	
14153	F	255	0.69	7.88	0.080	1.58	0.147	0.60	0.83	1.61	0.023	1.85	
14154	F	275	0.72	8.39	0.078	1.72	0.140	0.51	0.78	1.48	0.030	1.82	0.014
14155	F	255	0.81	8.32	0.090	1.60	0.170	0.53	0.85	1.37	0.024	1.80	0.016
14156	F	290	0.78	8.63	0.090	1.89	0.154	0.38	0.89	1.40	0.023	1.89	0.012
14157	F	210	0.39	5.58	0.055	1.23	0.123	0.41	0.73	1.05	0.018	1.89	0.008

Ninety-Day Feeding Study in the Rat.

TABLE 28. Continued. Organ Weights, Grams.

Animal No. & Group	Terminal Weight Grams	Sex	Spleen	Liver	Adrenals	Kidneys	Testes/ Ovaries	Thymus	Heart	Lung	Thyroid	Brain	Pituitary
<u>90-DAY TERMINAL SACRIFICE:</u>													
<u>100 ppm.:</u>													
14203	M	455	1.49	14.08	0.051	2.50	3.05	0.41	1.43	2.28	0.019	1.85	0.007
14204	M	560	0.99	17.48	0.061	3.38	3.70	0.60	1.73	2.10	0.025	1.93	0.014
14206	M	465	1.20	14.60	0.067	3.25	3.50	0.60	1.38	2.72	0.024	2.08	0.011
14207	M	435	1.20	12.02	0.060	3.05	3.93	0.82	1.22	1.74	0.023	2.08	0.009
14209	M	400	1.21	12.07	0.054	2.72	3.19	0.44	1.28	1.90	0.025	1.82	0.009
14210	M	520	1.24	15.48	0.053	2.79	3.10	1.11	1.39	2.20	0.021	1.90	0.010
14211	M	470	1.48	13.78	0.035	3.10	3.42	0.36	1.43	1.95	0.039	2.19	0.011
14213	M	380	1.03	11.20	0.051	2.61	3.43	0.58	1.20	1.62		2.09	0.009
14214	M	485	1.02	14.03	0.061	2.89	3.50	0.60	1.46	2.71	0.027	2.09	0.013
14215	M	420	0.70	12.49	0.056	2.80	3.33	0.90	1.30	2.08	0.028	2.00	0.011
14216	M	535	0.90	15.90	0.055	3.29	3.32	0.59	1.50	2.02	0.036	1.97	0.013
14218	M	520	1.41	17.65	0.081	3.02	3.74	0.72	1.71	2.21	0.022	1.83	0.015
14219	M	450	1.00	13.65	0.055	2.95	2.85	0.54	1.40	1.90	0.029	2.08	0.010
14183	F	310	0.64	8.78	0.076	1.93	0.210	0.50	0.80	1.52	0.028	1.78	0.014
14186	F	345	0.81	9.62	0.093	2.15	0.203	0.58	1.14	1.34	0.034	2.02	0.014
14187	F	280	0.81	8.00	0.074	1.77	0.186	0.44	0.79	1.21	0.026	1.90	0.018
14189	F	265	1.10	8.40	0.081	1.91	0.183	0.81	0.83	1.42	0.027	1.73	0.015
14190	F	255	0.70	7.58	0.067	1.58	0.165	0.33	0.71	1.29	0.023	1.75	0.011
14191	F	290	1.22	7.51	0.061	1.96	0.168	0.56	0.92	1.43	0.016	1.89	0.012
14192	F	245	0.68	7.58	0.069	1.80	0.161	0.30	0.72	1.43	0.023	1.91	0.011
14195	F	280	0.71	8.50	0.093	2.01	0.161	0.60	0.93	1.30	0.026	1.88	0.014
14196	F	270	0.89	8.59	0.064	1.80	0.177	0.48	0.89	1.53	0.028	1.92	0.008
14197	F	260	0.54	7.32	0.049	1.72	0.116	0.49	0.88	1.28	0.022	1.77	0.012
14198	F	295	1.00	8.40	0.055	1.79	0.181	0.42	0.79	1.60	0.014	1.92	0.013
14199	F	280	0.76	8.83	0.050	1.81	0.170	0.61	1.01	1.41	0.019	1.81	0.015
14200	F	285	0.81	8.80	0.077	1.98	0.119	0.71	0.81	1.37	0.023	1.87	0.014
14201	F	310	0.68	7.88	0.084	1.99	0.198	0.48	0.93	1.50	0.020	2.09	0.013

Ninety-Day Feeding Study in the Rat.

TABLE 28. Continued. Organ Weights, Grams.

Animal No. & Group	Terminal Weight Sex	Spleen	Liver	Adrenals	Kidneys	Testes/ Ovaries						Brain	Pituitary
								Thymus	Heart	Lung	Thyroid		
90-DAY TERMINAL SACRIFICE:													
1000 ppm.:													
14243	M	455	1.09	12.68	0.054	2.87	3.39	0.27	1.30	1.92	0.019	1.82	0.030
14244	M	535	0.97	17.13	0.065	3.51	3.60	0.98	1.50	2.94	0.026	1.98	0.012
14247	M	475	0.99	16.20	0.053	3.00	3.40	0.41	1.31	2.21	0.031	2.25	0.010
14249	M	470	1.17	15.88	0.082	3.21	3.58	0.68	1.51	1.65	0.034	1.93	0.012
14250	M	440	0.89	16.13	0.057	3.01	3.30	0.42	1.32	1.98	0.031	1.91	0.013
14252	M	470	0.79	16.61	0.067	3.42	3.80	0.60	1.39	1.93	0.029	1.89	Missed
14254	M	460	1.18	15.50	0.058	3.23	3.41	0.59	1.31	2.75	0.017	1.81	0.012
14255	M	410	1.00	12.80	0.053	2.60	3.30	0.79	1.21	2.00	0.026	2.01	0.012
14256	M	385	1.01	12.39	0.055	2.58	2.81	0.35	1.10	1.71	0.024	1.98	0.008
14257	M	415	0.63	14.90	0.055	3.03	3.29	0.78	1.21	1.68	0.040	1.99	0.009
14224	F	290	0.69	12.38	0.107	2.60	0.172	0.40	0.90	1.49	0.027	1.81	0.011
14226	F	270	0.51	8.91	0.066	2.21	0.097	0.22	1.40	1.39	0.037	1.89	0.005
14227	F	295	0.50	9.40	0.073	2.49	0.127	0.35	0.85	1.52	Missed	1.90	0.009
14229	F	305	0.89	10.75	0.075	2.10	0.186	0.61	0.98	1.35	Missed	1.91	0.012
14231	F	320	0.77	11.55	0.097	2.55	0.206	0.37	1.09	1.83	0.026	2.08	0.010
14232	F	280	0.77	11.00	0.096	2.17	0.201	0.80	0.88	1.24	0.040	1.90	0.014
14233	F	230	1.22	14.39	0.116	2.89	0.171	0.68	1.12	1.65	0.031	1.99	0.019
14235	F	325	0.84	8.14	Missed	1.73	0.130	0.31	0.70	1.20	0.022	1.68	0.014
14236	F	275	0.61	10.52	0.074	2.21	0.144	0.50	0.91	1.33	0.028	1.92	0.017
14237	F	250	0.88	8.81	0.077	2.08	0.117	0.75	1.00	1.79	0.034	1.85	0.016

Ninety-Day Feeding Study in the Rat.

TABLE 28. Continued. Organ Weights, Grams.

Animal No. & Group	Sex	Terminal Weight Grams	Testes/ Ovaries											
			Spleen	Liver	Adrenals	Kidneys	Ovaries	Thymus	Heart	Lung	Thyroid	Brain	Pituitary	
<u>90-DAY TERMINAL SACRIFICE:</u>														
<u>1000 ppm.:</u>														
14243	M	455	1.09	12.68	0.054	2.87	3.39	0.27	1.30	1.92	0.019	1.82	0.030	
14244	M	535	0.97	17.13	0.065	3.51	3.60	0.98	1.50	2.94	0.026	1.98	0.012	
14247	M	475	0.99	16.20	0.053	3.00	3.40	0.41	1.31	2.21	0.031	2.25	0.010	
14249	M	470	1.17	15.88	0.082	3.21	3.58	0.68	1.51	1.65	0.034	1.93	0.012	
14250	M	440	0.89	16.13	0.057	3.01	3.30	0.42	1.32	1.98	0.031	1.91	0.013	
14252	M	470	0.79	16.61	0.067	3.42	3.80	0.60	1.39	1.93	0.029	1.89	Missed	
14254	M	460	1.18	15.50	0.058	3.23	3.41	0.59	1.31	2.75	0.017	1.81	0.012	
14255	M	410	1.00	12.80	0.053	2.60	3.30	0.79	1.21	2.00	0.026	2.01	0.012	
14256	M	385	1.01	12.39	0.055	2.58	2.81	0.35	1.10	1.71	0.024	1.98	0.008	
14257	M	415	0.63	14.90	0.055	3.03	3.29	0.78	1.21	1.68	0.040	1.99	0.009	
14224	F	290	0.69	12.38	0.107	2.60	0.172	0.40	0.90	1.49	0.027	1.81	0.011	
14226	F	270	0.51	8.91	0.066	2.21	0.097	0.22	1.40	1.39	0.037	1.89	0.005	
14227	F	295	0.50	9.40	0.073	2.49	0.127	0.35	0.85	1.52	Missed	1.90	0.009	
14229	F	305	0.89	10.75	0.075	2.10	0.186	0.61	0.98	1.35	Missed	1.91	0.012	
14231	F	320	0.77	11.55	0.097	2.55	0.206	0.37	1.09	1.83	0.026	2.08	0.010	
14232	F	280	0.77	11.00	0.096	2.17	0.201	0.80	0.88	1.24	0.040	1.90	0.014	
14233	F	230	1.22	14.39	0.116	2.89	0.171	0.68	1.12	1.65	0.031	1.99	0.019	
14235	F	325	0.84	8.14	Missed	1.73	0.130	0.31	0.70	1.20	0.022	1.68	0.014	
14236	F	275	0.61	10.52	0.074	2.21	0.144	0.50	0.91	1.33	0.028	1.92	0.017	
14237	F	250	0.88	8.81	0.077	2.08	0.117	0.75	1.00	1.79	0.034	1.85	0.016	

Ninety-Day Feeding Study in the Rat.

TABLE 28. Continued. Organ Weights, Grams.

Animal No. & Group	Terminal Weight Grams	Sex	Testes/ Spleen Liver Adrenals Kidneys Ovaries Thymus Heart Lung Thyroid Brain Pituitary											
<u>90-DAY TERMINAL SACRIFICE:</u>														
<u>5000 ppm.:</u>														
14283	M	420	1.30	19.57	0.058	3.30	3.30	0.58	1.21	1.88	0.024	2.04	0.010	
14284	M	525	1.02	25.68	0.065	3.91	2.87	1.32	1.43	2.35	0.035	2.09	0.015	
14286	M	345	0.98	15.13	0.059	2.62	3.21	0.69	0.91	2.18	0.023	2.08	0.008	
14287	M	425	1.11	20.11	0.050	3.30	3.39	0.80	1.30	1.98	0.029	2.10	0.011	
14290	M	430	0.90	21.49	0.059	3.38	3.60	0.42	1.58	1.61	0.027	1.92	0.012	
14291	M	410	0.51	21.65	0.060	3.18	3.20	0.59	1.17	2.02	0.031	1.83	0.010	
14292	M	390	1.19	19.82	0.050	3.20	3.49	0.63	1.20	1.42	0.019	2.02	0.009	
14294	M	395	0.77	18.30	0.054	3.30	3.40	0.30	1.38	2.09	0.021	1.90	0.008	
14296	M	430	1.12	19.82	0.054	3.31	3.60	0.79	1.42	1.60	0.023	1.92	0.010	
14297	M	480	0.91	22.19	0.058	3.80	3.61	0.51	1.28	1.92	0.017	2.05	0.011	
14264	F	220	0.90	9.84	0.063	2.00	0.146	0.41	0.78	1.38	0.020	1.78	0.010	
14266	F	225	0.83	11.40	0.077	2.03	0.122		0.80	2.93	0.018	1.88	0.011	
14267	F	250	0.48	10.85	0.067	2.28	0.178	0.58	0.72	1.28	0.019	1.80	0.012	
14269	F	220	0.58	11.01	0.068	2.25	0.092	0.53	0.83	1.13	0.024	1.91	0.011	
14271	F	270	1.08	11.91	0.072	2.78		0.57	0.98	1.40	0.018	1.79		
14272	F	215	0.67	9.57	0.083	1.80	0.130	0.58	0.70	1.32	0.032	1.91	0.010	
14273	F	240	0.70	11.75	0.062	2.38	0.180	0.42	0.90	1.21	0.018	1.98	0.007	
14274	F	240	1.51	10.41	0.059	2.45	0.107	0.51	0.83	1.60	0.015	1.81	0.008	
14276	F	250	0.48	11.30	0.085	2.12	0.144	0.43	1.03	1.61	0.031	1.81	0.013	
14277	F	235	0.83	11.41	0.079	2.40	0.182	0.48	0.95	1.51	0.025	1.78		

(b) Ninety-Day Feeding Study in the Rat.

TABLE 29. Incidence of Histopathologic Lesions.

Tissue and Lesion	30 Day Interim Sacrifice				60 Day Interim Sacrifice			
	Control		2500 ppm.		Control		5000 ppm.	
	M	F	M	F	M	F	M	F
brain - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
- glial nodules								
spinal cord - no lesion	3/3	3/3	2/2	3/3	3/3	3/3	3/3	3/3
peripheral nerve - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
eye - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	2/2
pituitary - no lesion	2/2	3/3	2/2	1/1	3/3	2/2	3/3	2/2
thyroid - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
parathyroid - no lesion			1/1		3/3	3/3	2/2	1/1
adrenal - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
- ossification								
lung - no lesion	3/3	2/3	3/3	2/3	3/3	2/3	3/3	3/3
- chronic respiratory disease			1/3		1/3		1/3	
heart - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
- arteritis								
spleen - no lesion	3/3	3/3	2/3	3/3	3/3	3/3	3/3	3/3
- hematopoiesis					1/3			
lymph node - no lesion	3/3	3/3	3/3	3/3	2/2	3/3	3/3	3/3
thymus - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
bone marrow - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
salivary gland - no lesion	3/3	3/3	3/3	3/3	3/3	2/2	3/3	3/3
stomach - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
small intestine - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
large intestine - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	2/3	3/3
- nematodes							1/3	

90 Day Terminal Sacrifice				21 Day Withdrawal					
Control		<u>1000 ppm.</u>		<u>5000 ppm.</u>		Control		<u>5000 ppm.</u>	
M	F	M	F	M	F	M	F	M	F
10/10	10/10			9/10	10/10	3/3	3/3	3/3	3/3
				1/10					
8/8	9/9			9/9	9/9	3/3	3/3	3/3	3/3
9/9	9/9			9/9	8/8	3/3	3/3	3/3	3/3
10/10	9/9			9/9	9/9	3/3	3/3	3/3	3/3
9/9	3/3			8/8	1/1	3/3	3/3	3/3	3/3
10/10	9/9			10/10	9/9	3/3	3/3	3/3	3/3
5/5	6/6			3/3	2/2	1/1	1/1	3/3	1/1
10/10	10/10			9/10	10/10	3/3	3/3	3/3	3/3
				1/10					
5/10	9/10			7/10	7/10	2/3	1/3	2/3	1/3
5/10	1/10			3/10	3/10	1/3	2/3	1/3	2/3
9/10	10/10			10/10	10/10	3/3	3/3	3/3	3/3
1/10									
10/10	10/10			9/9	10/10	3/3	3/3	3/3	3/3
9/9	8/8			8/8	10/10	3/3	2/2	3/3	3/3
9/9	9/9			9/9	8/8	3/3	3/3	3/3	3/3
10/10	10/10			9/9	10/10	3/3	3/3	3/3	3/3
9/9	9/9			9/9	8/8	3/3	3/3	3/3	3/3
10/10	10/10			10/10	10/10	3/3	3/3	3/3	3/3
10/10	10/10			10/10	10/10	3/3	3/3	3/3	3/3
10/10	10/10			10/10	9/10	3/3	3/3	3/3	3/3
				1/10					

Ninety-Day Feeding Study in the Rat.

TABLE 29. Continued. Incidence of Histopathologic Lesions.

<u>Tissue and Lesion</u>	30 Day				60 Day			
	Interim Sacrifice		Interim Sacrifice		Control		Control	
	M	F	M	F	M	F	M	F
pancreas - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
pancreatitis, focal								
liver - no lesion	2/3	3/3	0/3	2/3	2/3	2/3	0/3	0/3
- portal inflammatory infiltrate	1/3			1/3	1/3	1/3	1/3	1/3
- centrolobular change			3/3			3/3	2/2	
kidney - no lesion	3/3	3/3	3/3	2/3	3/3	3/3	3/3	3/3
- focal nephritis					1/3			
- hyaline droplets								
urinary bladder - no lesion	2/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
- siminal plug	1/3							
testes or ovaries - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	2/3	3/3
- edema							1/3	
prostate or uterus - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
- hydrometra								
skeletal muscle - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
skin - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
bone - no lesion	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3

90 Day Terminal Sacrifice						21 Day Withdrawal					
Control		1000 ppm.		5000 ppm.		Control		5000 ppm.			
M	F	M	F	M	F	M	F	M	F		
10/10	10/10			10/10	10/10	2/3	3/3	3/3	3/3		
						1/3					
7/10	5/10	7/10	6/10	1/10	2/10	2/3	2/3	0/3	0/3		
3/10	5/10	3/10	4/10	1/10	8/10	1/3	1/3	1/3	3/3		
1/10				9/10	2/10			2/3			
8/10	10/10			10/10	9/10	3/3	3/3	3/3	2/3		
					1/10			1/3			
2/10											
6/8	9/9			10/10	9/9	1/2	3/3	3/3	3/3		
2/8						1/2					
10/10	10/10			10/10	10/10	3/3	3/3	3/3	3/3		
10/10	9/10			10/10	10/10	3/3	3/3	2/2	2/2		
1/10											
9/9	10/10			10/10	9/9	3/3	3/3	3/3	3/3		
9/9	10/10			9/9	6/6	3/3	3/3	3/3	3/3		
10/10	10/10			10/10	10/10	3/3	3/3	3/3	3/3		

Ninety-Day Feeding Study in the Rat.

TABLE 30. Histopathologic Observations. Thirty-Day Interim Sacrifice.

Animal Number	Sex	Tissue	Comment
<u>Control:</u>			
14162	M	liver	Mild portal lymphocytic infiltrate.
14165	M		No lesion.
14168	M	urinary bladder	Seminal plug.
14142	F		No lesion..
14145	F	lung	Small focus of pneumonic consolidation.
14146	F		No lesion.
<u>2500 ppm.:</u>			
14282	M	liver	Slight hypertrophy of centrolobular hepatocytes.
14285	M	liver	Slight hypertrophy of centrolobular hepatocytes with loss of coarse cytoplasmic granularity.
14288	M	liver	Slight hypertrophy of centrolobular hepatocytes with loss of usual coarse granularity.
		spleen	Moderate hematopoetic activity.
14262	F	liver	Mild portal lymphocytic infiltrate.
		kidney	Mild focal interstitial lymphocytic infiltrate.
14265	F	lung	Moderate peribronchial lymphoid hyperplasia.
14268	F		No lesion.

Ninety-Day Feeding Study in the Rat.

TABLE 30. Continued. Histopathologic Observations. Sixty-Day Interim Sacrifice.

Animal Number	Sex	Tissue	Comment
<u>Control:</u>			
14167	M		No lesion.
14170	M		No lesion.
14178	M	liver	Slight portal lymphocytic infiltrate.
14143	F		No lesion.
14149	F	liver lung	Slight portal lymphocytic infiltrate. Few small scattered foci of pneumonic consolidation.
14152	F		No lesion.
<u>5000 ppm.:</u>			
14289	M	large intestine testes	Nematodes. One testis was edematous and had reduced spermatogenic activity.
		liver	Hypertrophy of hepatocytes which was more pronounced in the centrolobular area; hepatocytes appeared to have higher glycogen content than controls.
14293	M	liver	Moderate hypertrophy of hepatocytes, predominately centrolobular with loss of coarse granularity. Moderate portal lymphocytic infiltrate with scattered small nodules of proliferated reticuloendothelial cells in liver parenchyma.
14295	M	liver	Hypertrophy of hepatocytes, primarily centrolobular, hepatocytes appeared to contain more glycogen than control.
14263	F	liver	Slight hypertrophy of hepatocytes, predominately centrolobular.
14270	F	liver	Slight portal lymphocytic infiltrate.
14275	F	liver	Slight hypertrophy of centrolobular hepatocytes.

Ninety-Day Feeding Study in the Rat.

TABLE 30. Continued. Histopathologic Observations. Ninety-Day Terminal Sacrifice.

Animal Number	Sex	Tissue	Comment
<u>Control:</u>			
14163	M	lung	Moderate perivascular lymphocytic cuffing.
14164	M	urinary bladder	Seminal plug.
14166	M		No lesion.
14169	M	kidney	Small numbers of hyaline droplets in epithelium of convoluted tubules.
		liver	Slight portal lymphocytic infiltrate and bile duct proliferation.
14171	M	lung	Moderate perivascular lymphocytic cuffing with localized pneumonitis.
14172	M	urinary bladder lung	Seminal plug. Slight perivascular lymphocytic cuffing, peribronchial lymphoid hyperplasia.
14173	M	lung kidney	Slight peribronchial lymphoid hyperplasia. Moderate numbers of hyaline droplets in epithelium of convoluted tubules.
14174	M		No lesion.
14175	M	liver	Slight portal lymphocytic infiltrate, centrolobular hepatocytes less coarsely granular.
		lung	Slight perivascular lymphocytic cuffing.
14176	M	liver heart	Slight portal lymphocytic infiltrate. Moderate mural necrosis and perivascular inflammatory infiltrate of a coronary vessel.
14144	F		No lesion.
14147	F		No lesion.
14148	F	liver	Slight portal lymphocytic infiltrate and bile duct proliferation.

Ninety-Day Feeding Study in the Rat.

TABLE 30. Continued. Histopathologic Observations. Ninety-Day Terminal Sacrifice.

Animal Number	Sex	Tissue	Comment
<u>Control (cont'd):</u>			
14150	F		No lesion.
14151	F	liver	Slight portal lymphocytic infiltrate.
14153	F	lung liver	Small area of chronic pneumonitis. Slight portal lymphocytic infiltrate.
14154	F	uterus liver	Hydometra. Slight portal lymphocytic infiltrate.
14155	F	liver	Slight portal lymphocytic infiltrate.
14156	F		No lesion.
14157	F		No lesion.

Company Sanitized. Does not contain TSCA CBI

Ninety-Day Feeding Study in the Rat.

TABLE 30. Continued. Histopathologic Observations. Ninety-Day Terminal Sacrifice.

Animal Number	Sex	Tissue	Comment
<u>1000 ppm., Liver Only:</u>			
14243	M		No lesion.
14244	M		No lesion.
14247	M		Slight portal lymphocytic infiltrate.
14249	M		No lesion.
14250	M		No lesion.
14252	M		No lesion.
14254	M		No lesion.
14255	M		No lesion.
14256	M		Slight portal lymphocytic infiltrate.
14257	M		Slight portal lymphocytic infiltrate.
14224	F		No lesion.
14226	F		No lesion.
14227	F		No lesion.
14229	F		Slight portal lymphocytic infiltrate.
14231	F		No lesion.
14232	F		Slight portal lymphocytic infiltrate.
14233	F		Slight portal lymphocytic infiltrate.
14235	F		Slight portal lymphocytic infiltrate.
14236	F		No lesion..
14237	F		No lesion.

Ninety-Day Feeding Study in the Rat.

TABLE 30. Continued. Histopathologic Observations. Ninety-Day Terminal Sacrifice.

Animal Number	Sex	Tissue	Comment
<u>5000 ppm.:</u>			
14283	M	liver	Centrolobular hepatocytes slightly hypertrophied cytoplasm less coarsely granular than in hepatocytes at periphery of lobules.
14284	M	liver	Centrolobular hepatocytes less coarsely granular than those at periphery. Slight peribronchial lymphoid hyperplasia.
14286	M	brain	Glial nodules in medulla, structure resembling <u>Sarcosporidia</u> also present.
		lung	Slight perivasculär lymphocytic cuffing, area of pneumonic consolidation.
		liver	Centrolobular hepatocytes less granular than those at periphery of lobule, slight portal lymphocytic infiltrate.
14287	M	adrenal	Area of osteoid and bone in cortex of one adrenal.
		liver	Cytoplasm of centrolobular hepatocytes less coarsely granular than cytoplasm of hepatocytes at periphery, slight portal lymphocytic infiltrate.
14290	M		No lesion.
14291	M	liver	Cytoplasm of centrolobular hepatocytes less coarsely granular than cytoplasm of hepatocytes at periphery of lobules.
14292	M	liver	Centrolobular hepatocytes less coarsely granular than those at periphery of lobules. Slight peribronchial lymphoid hyperplasia.
14294	M	liver	Centrolobular hepatocytes less coarsely granular than those at periphery of lobule.
14296	M	liver	Marked portal lymphocytic infiltrate, centrolobular hepatocytes slightly less granular than those at periphery of lobule.

Ninety-Day Feeding Study in the Rat.

TABLE 30. Continued. Histopathologic Observations. Ninety-Day Terminal Sacrifice.

Animal Number	Sex	Tissue	Comment
<u>5000 ppm. (cont'd):</u>			
14297	M	liver	Centrolobular hepatocytes less coarsely granular than those at periphery of lobule.
14264	F	liver	Moderate portal lymphocytic infiltrate.
14266	F	liver	Centrolobular hepatocytes less coarsely granular than those at periphery, mild portal lymphocytic infiltrate.
		lung	Chronic murine pneumonia of moderate severity.
14267	F	liver	Mild portal lymphocytic infiltrate.
14269	F	liver	Slight portal lymphocytic infiltrate.
14271	F	kidney liver	Moderate interstitial lymphocytic infiltrate. Mild portal lymphocytic infiltrate.
14272	F	liver	Mild portal lymphocytic infiltrate.
14273	F	liver large intestine	Mild portal lymphocytic infiltrate. Nematodes.
14274	F	liver	Mild portal lymphocytic infiltrate, centrolobular hepatocytes less coarsely granular than those at periphery.
14276	F	lung	Moderate perivascular lymphocytic cuffing.
14277	F	lung	Moderate perivascular lymphocytic cuffing.

Ninety-Day Feeding Study in the Rat.

TABLE 30. Continued. Histopathologic Observations. 21-Day Compound Withdrawal.

Animal Number	Sex	Tissue	Comment
<u>Control:</u>			
14177	M		No lesion.
14179	M	pancreas	Small area of necrosis and chronic inflammation.
14180	M	lung liver urinary bladder	Moderate peribronchial lymphoid hyperplasia. Slight portal lymphocytic infiltrate. Seminal plug.
14158	F		No lesion.
14159	F	lung	Moderate peribronchial lymphoid hyperplasia.
14161	F	liver lung	Slight portal lymphocytic infiltrate. Slight perivasculat lymphocytic cuffing.
<u>5000 ppm.:</u>			
14298	M	liver lung	Slight portal lymphocytic infiltrate. Mild peribronchial lymphoid hyperplasia.
14299	M	urinary bladder liver	Seminal plug. Centrolobular hepatocytes appeared slightly hypertrophied.
14300	M	liver	Centrolobular hepatocytes appeared slightly hypertrophied.
14278	F	kidney liver lung	Slight interstitial lymphocytic infiltrate, few calcified tubules. Moderate lymphocytic inflammatory infiltrate, primarily in portal areas. Moderate peribronchial lymphoid hyperplasia.
14279	F	liver	Mild portal lymphocytic infiltrate, few scattered vacuolated hepatocytes.
14280	F	lung liver	Slight peribronchial lymphoid hyperplasia. Slight portal lymphocytic infiltrate.