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ADDENDA - MALIC ACID

B19

Addenda-Malic Acid-Volume 4 11/11/70

TWO-GENERATION REPRODUCTION STUDY - RATS

X-5120

FINAL REPORT

Submitted to

Specialty Chemicals Division
Allied Chemical Corporation
Buffalo, New York

HAZLETON LABORATORIES, INC.
A SUBSIDIARY OF TRW INC.
P.O. BOX 30, FALLS CHURCH, VIRGINIA 22046

November 11, 1970

HAZLETON LABORATORIES, INC.
TRW LIFE SCIENCES CENTER

Sponsor: Specialty Chemicals Division
Allied Chemical Corporation

Date: November 11, 1970

Material: X-5120

Lot No: BC-76839

Subject: FINAL REPORT
Two-Generation Reproduction Study - Rats
Project No. 165-128

SUMMARY

This study was conducted to evaluate the effects of X-5120 on the reproduction of albino rats. The compound was administered in the diet at dietary levels of 1000 and 10,000 ppm for nine weeks prior to mating for the F_{1A} generation through the sacrifice of the F_{2B} pups at weaning. Control rats received basal laboratory diet only.

The P_1 males from Groups No. 2 and No. 3 had body weight gains during the nine-week premating period which were slightly lower than that of the control animals. The appearance and behavior of the parental animals and the pups throughout the study were generally comparable, except the number of F_{1B} pups which were weak or showed labored respiration during the lactation period was increased at the high level. Reproduction indices of the test animals were similar to those of the controls.

The F_{2B} fetuses delivered by Caesarean section showed no meaningful differences between the control and the test groups in the number and placement of implantation and resorption sites or in the number, weight, and length of live fetuses. There were no dead fetuses.

The F_{2B} fetuses which were examined skeletally showed no trends toward lesser or greater skeletal development in either of the test groups.

INTRODUCTION

This study was conducted to evaluate the effect of X-5120 on the reproduction of albino rats. The study was initiated on July 1, 1969, and was terminated on July 22, 1970, after weaning of the F_{2B} litter.

MATERIAL

Identification X-5120; Lot No. BC-76839.

Description Fine, white, crystalline material with a faint odor.

Receipt Date June 2, 1969.

Purity Assumed 100% active.

METHODS

Animal Groups

A total of 90 weanling albino rats, 30 males and 60 females of the Charles River Caesarean-derived strain, were used to establish groups of P_1 animals. At initiation the females weighed between 114 and 141 grams, and the males weighed between 132 and 168 grams. The animals were placed at random into the following groups:

Group No.	No. of Animals male	No. of Animals female	Dosage Level ppm
1 (control)	10	20	-
2	10	20	1,000
3	10	20	10,000

Diet Preparation

Control rats were fed a basal diet of Purina Laboratory Chow. The test material was incorporated into the basal diet on a weight-per-weight basis and throughly mixed in a twin-shell blender to provide the appropriate dietary level for each test group. Fresh diets were prepared weekly, and the appropriate diets and water were available to the animals at all times.

Premating Period

Prior to initiation of the first and second breeding phases, parental generation animals were maintained in individual cages and fed the appropriate diets until they reached maturity. Individual body weights, food consumption, and observations of physical appearance and behavior of the animals were recorded initially, at four weeks, and at nine weeks for the P_1 and P_2 animals.

Reproduction Phase

Mating (P_1 Generation): At the end of the ninth week of compound administration, two females and one male within each group were placed in each breeding cage. At weekly intervals during the three-week mating period, the males were rotated among the females within each group. Following the mating period, the males were returned to their individual cages, and the females were placed in individual breeding cages to produce the first (F_{1A}) litters.

First Filial Generation (F_{1A} and F_{1B} Litters): Twenty-four hours after birth, the first (F_{1A}) litters were reduced to a maximum of eight pups (equally divided by sex, if possible) to be nursed. A record was kept of the number of conceptions, number of litters, live births, stillbirths, size of natural and nursing litters, deaths during the period of lactation, and number of pups weaned. The weights of the pups by sex were recorded at 24 hours and at weaning. All pups were observed for gross signs of abnormality. After a 21-day nursing period, representative pups from each litter (approximately one-third of each litter) were necropsied and gross observations were recorded; the remaining weanlings were discarded. One week after weaning of the last F_{1A} litter, the P_1 parents were remated to produce their second (F_{1B}) litters. The procedures used were the same as those described for the first (F_{1A}) litters. Records were maintained and observations made as previously. After a 21-day nursing period, 20 female and 10 male weanlings from the control and each test group were selected at random and designated as the second (P_2) parental generation. Approximately one-third of the F_{1B} litters were sacrificed, and gross necropsies were performed. All excess weanlings and all of the P_1 parents were sacrificed and discarded.

Second Filial Generation (F_{2A} and F_{2B} Litters): The P_2 animals were individually housed and were maintained on their appropriate diets until they reached approximately 100 days of age. The F_{2A} litters were obtained, records were maintained, and observations were made by the procedure described for the first reproduction phase. Body weights of the F_{2A} pups

by sex were recorded at 24 hours and at weaning. One-half of the F_{2B} litters were delivered naturally and held until weaning, and the same observations were made on these pups as were made on the other naturally delivered pups. The other one-half of the F_{2B} litters were delivered by Caesarean section on Day 19 of gestation.

Terminal Studies

Necropsies were performed on one-third of the pups at weaning in each of the F_{1A}, F_{1B}, F_{2A}, and F_{2B} litters. Sacrifice was accomplished by exsanguination under Diabutal anesthesia.

One-half of the fetuses from each F_{2B} litter delivered by Caesarean section were necropsied and examined for visceral abnormalities. The other one-half was cleared and stained for evaluation of skeletal development.

Skeletal Examination of F_{2B} Fetuses

Following evisceration, skinning, and fixation (in 80% ethyl alcohol for two months), the F_{2B} fetuses designated for skeletal evaluation were placed in 0.5% potassium hydroxide for 24 hours. The fetuses were then stained for 24 hours with 0.01% alizarin red S in 1.0% potassium hydroxide. The fetuses were rinsed with distilled water, and then the stain was extracted from the soft tissue with one part benzyl alcohol, one part glycerin, and two parts 70% ethyl alcohol. The fetuses were cleared with 75% glycerin for at least eight hours. Flood lamps were kept 10 inches above the containers throughout the procedure except for the maceration in potassium hydroxide. Each skeleton was evaluated for relative differences in size, location, normal or abnormal bone structure, degree of ossification, and the presence or absence of bone structure.

Tissue Preservation

The stained and cleared fetuses were preserved in 100% glycerin. Pups which died during nursing were generally preserved in 10% neutral buffered formalin. The viscera from the F_{2B} fetuses delivered by Caesarean section which were not evaluated skeletally were preserved in 10% neutral buffered formalin.

The following tissues from 10 male and 10 female weanling pups chosen at random from the F_{2B} litters of the control and test groups were preserved in 10% neutral buffered formalin: brain, pituitary, eye, thyroid, lung, heart, liver, spleen, kidneys, adrenals, stomach, pancreas, small intestine, large intestine, urinary bladder, gonad, bone, bone marrow, and any unusual lesions.

Analysis of Data

The reproduction indices were derived as follows: fertility index, number of pregnancies divided by the number of matings; gestation index, number of litters born divided by the number of pregnancies observed; live birth index, number of pups born alive divided by the number of pups born; and weaning survival index, number of pups weaned divided by the number of pups left to nurse.

RESULTS

Parental Generations-Premating Periods

The mean weights, weight ranges, food consumption, and survival data for the two parental generations (P_1 and P_2) during the premating periods are presented in Table No. 1.

Food consumption and survival of the test males and females were comparable with those of the respective control animals. The P_1 males from Groups No. 2 and No. 3 had body weight gains which were slightly lower than that of the control animals. The other parental animals had comparable body weight gain during the premating periods.

The appearance and behavior of the control and test rats in each parental generation were similar. Incidental signs such as hunching, alopecia, or soft feces were noted in all groups.

Reproduction Phase A summary of the litter data for the two filial generations is presented in Table No. 2.

First Reproduction Phase:

F_{1A} - Signs of incidental laboratory disease were observed in control and test parents at a comparable incidence. Signs included wheezing, hunching, thinness, and bloody crust on eyes. None of the P_1 animals died during the F_{1A} phase. The various indices, litter size, and pup body weights were comparable among the control and test groups. All of the necropsied pups in three of the Group No. 2 litters had rough surfaces on the spleen; one Group No. 2 pup had a dilated renal pelvis; and one Group No. 3 pup had an enlarged skull with the head blackish blue.

F_{1B} - Signs of incidental laboratory disease were observed in control and test parents at a comparable incidence. These signs included alopecia, wheezing, bloody crust on eyes, and hunching. One control

parental female apparently aborted. Another cannibalized her pups before the 24-hour weights were taken and then was pale, hunched, and showed labored respiration. None of the P_1 animals died during the F_{1B} phase. The various indices, litter size, and pup body weights were comparable among the control and test groups. The number of pups which were weak or showed labored respiration during lactation was increased at the high level. No abnormal necropsy findings were observed in any of the pups sacrificed at weaning. Those animals found dead during lactation generally had the stomach filled with gas.

Second Reproduction Phase:

F_{2A} - The control and test parents were generally normal in appearance throughout the F_{2A} phase. The incidence of any type of respiratory involvement was much less than that noted in the P_1 animals during the first reproduction phase. One Group No. 1 female was found dead the day after her pups had been weaned. Necropsy showed blood in the stomach, yellowish green tinge of liver and kidneys, and renal cortex narrow. Two Group No. 3 males were found dead after breeding. One was not necropsied, but the other had lungs which were abscessed, consolidated, distended, and adhered to the rib cage. The various indices, litter size, and pup body weights were comparable among the control and test groups. Necropsy on the surviving pups at weaning showed renal discoloration in two Group No. 2 and three Group No. 3 animals, dark red corticomedullary

zone in three Group No. 3 animals, dark renal medulla in four Group No. 2 and three Group No. 3 animals, rough surface on spleen in four Group No. 2 and two Group No. 3 animals, and white foci on the spleen in three Group No. 2 animals. One Group No. 3 pup had a firm, enlarged, and irregularly-shaped cecum with a hole penetrating through it.

F_{2B} - The control and test parents were generally normal in appearance throughout the F_{2B} phase although wheezing was observed in all groups. One Group No. 3 male was found dead during breeding; this animal was discarded without necropsy. The various indices, litter size, and pup weights for those animals which were allowed to deliver normally were comparable among the control and test groups. Weakness and labored respiration were noted in a few pups in Group No. 2. Necropsy showed the renal pelvis of one Group No. 3 pup dilated.

Caesarean Data for F_{2B} Fetuses

The results of uterine and litter observations are presented in Table No. 3. Mean weights and lengths were based on the number of fetuses for which measurements were recorded. Mean values for the remaining parameters were based on the number of litters delivered by Caesarean section.

There were no meaningful differences between the control and the test groups in the number and placement of implantation and resorption sites or in the number, weight, and length of live fetuses. There were no dead fetuses.

Litter incidence for Caesarean deliveries is indicated below.

Group	Number of Litters Evaluated	With Resorption Sites	With Dead Fetuses
Control	7	6	0
1,000 ppm	8	5	0
10,000 ppm	8	5	0

External and Visceral Data for F_{2B} Fetuses

One control fetus was small and pale at delivery. Otherwise, all fetuses were normal in external appearance. Visceral examination of one-half of the F_{2B} fetuses showed no alterations.

Skeletal Data for F_{2B} Fetuses

The results of the skeletal examinations of the F_{2B} fetuses from the control and the test litters are presented in Table No. 4. The skull, ribs, sternum, vertebrae, pelvic girdle, long bones, forepaws, and hindpaws of the animals were evaluated. Included in the table are those bone structures which are consistently indicative of developmental variations. The skeletal evaluations were presented in the table as the combined data for all of the animals in each group.

Skull abnormalities including interparietal bone split, extra ossification center between the interparietal and occipital bones, and occipital bone irregular in shape or underdeveloped were noted randomly in all groups and were not considered to be signs of compound effect. The two high level fetuses which had an extra ossification center between the interparietal and occipital bones also showed the

interparietal bone split. All fetuses had 13 pairs of ribs, but one high level fetus also had a single 14th rib which was small in size. The rudimentary bone structures were found at the 21st vertebra in all fetuses in which they were observed and were placed on one side only or on both sides of the vertebral column.

Skeletal development of the test fetuses was generally comparable to that of the controls. Slight differences between developmental indices for the test groups and those for the control group were considered to be within the range of normal variations in fetal development. No trends toward lesser or greater skeletal development were observed.

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EXPLANATION FOR FOOTNOTES

Table No. 3

C = Caesarean delivery; sacrifice of doe on day indicated.

NP = Not pregnant.

Table No. 4

* Grading of development of skull:

0 = no skull surface stained

1 = approximately 25% of skull surface stained

2 = approximately 50% of skull surface stained

3 = approximately 75% of skull surface stained

4 = approximately 100% of skull surface stained

** Single rib present on one side only of the vertebral column.

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Table No. 1 – Mean body weights, weight ranges, food consumption, and survival data for (☒ male, ☐ female) albino rats.

P1

TIME INTERVAL weeks	GROUP 1 WT. g.	GROUP 1 WT. RANGE g.	GROUP 1 FOOD g.	GROUP 1 SURV.	GROUP 2 WT. g.	GROUP 2 WT. RANGE g.	GROUP 2 FOOD g.	GROUP 2 SURV.	GROUP 3 WT. g.	GROUP 3 WT. RANGE g.	GROUP 3 FOOD g.	GROUP 3 SURV.	WT. g.	WT. RANGE g.	FOOD g.	SURV.
0	152	133–168	0	10/10	151	132–166	0	10/10	152	133–165	0	10/10				
4	336	275–379	161	10/10.	310	221–345	155	10/10	318	270–359	159	10/10				
9	432	366–484	158	10/10	398	308–445	153	10/10	404	351–461	147	10/10				

Table No. 1 – Mean body weights, weight ranges, food consumption, and survival data for (☒ male, ☐ female) albino rats.

P2

TIME INTERVAL weeks	GROUP 1 WT. g.	GROUP 1 WT. RANGE g.	GROUP 1 FOOD g.	GROUP 1 SURV.	GROUP 2 WT. g.	GROUP 2 WT. RANGE g.	GROUP 2 FOOD g.	GROUP 2 SURV.	GROUP 3 WT. g.	GROUP 3 WT. RANGE g.	GROUP 3 FOOD g.	GROUP 3 SURV.	WT. g.	WT. RANGE g.	FOOD g.	SURV.
0	114	102–126	0	10/10	111	102–121	0	10/10	103	97–121	0	10/10				
4	292	236–348	150	10/10	290	239–327	165	10/10	282	243–323	172	10/10				
9	409	350–489	177	10/10	402	331–433	175	10/10	408	347–448	178	10/10				

Table No. 1 – Mean body weights, weight ranges, food consumption, and survival data for (☐ male, ☒ female) albino rats.

P1

TIME INTERVAL weeks	GROUP 1 WT. g.	GROUP 1 WT. RANGE g.	GROUP 1 FOOD g.	GROUP 1 SURV.	GROUP 2 WT. g.	GROUP 2 WT. RANGE g.	GROUP 2 FOOD g.	GROUP 2 SURV.	GROUP 3 WT. g.	GROUP 3 WT. RANGE g.	GROUP 3 FOOD g.	GROUP 3 SURV.	WT. g.	WT. RANGE g.	FOOD g.	SURV.
0	128	114–140	0	20/20	128	115–140	0	20/20	129	115–141	0	20/20				
4	205	167–243	119	20/20	212	180–230	115	20/20	213	180–268	118	20/20				
9	249	202–322	110	20/20	250	217–284	108	20/20	251	214–300	105	20/20				

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Table No. 1 – Mean body weights, weight ranges, food consumption, and survival data for (☐ male, ☒ female) albino rats.

P2

TIME INTERVAL weeks	GROUP 1 WT. g.	GROUP 1 WT. RANGE g.	GROUP 1 FOOD g.	GROUP 1 SURV.	GROUP 2 WT. g.	GROUP 2 WT. RANGE g.	GROUP 2 FOOD g.	GROUP 2 SURV.	GROUP 3 WT. g.	GROUP 3 WT. RANGE g.	GROUP 3 FOOD g.	GROUP 3 SURV.	WT. g.	WT. RANGE g.	FOOD g.	SURV.
0	98	86-110	0	20/20	101	92-114	0	20/20	96	87-110	0	20/20				
4	204	179-242	135	20/20	206	178-243	141	20/20	202	169-227	137	20/20				
9	259	213-310	125	20/20	258	219-286	132	20/20	250	207-297	127	20/20				

Table No. 2 - Summary of breeding data for male and female albino rats

X-5120

	$P_1 \rightarrow F_{1A}$		
	CONTROL	1000 PPM	10,000 PPM
No. of Matings	20	20	20
No. of Pregnancies	20	18	20
Fertility Index	100%	90%	100%
No. of Litters Born	20	18	20
Gestation Index	100%	100%	100%
No. of Pups Born	237	200	235
No. of Pups Born Alive	233	200	226
Live Birth Index	98.3%	100%	96.2%
No. of Pups Left to Nurse	160	140	149
No. of Pups Weaned	153	133	133
Weaning Survival Index	95.6%	95.0%	89.3%
Mean Litter Size Born:			
No. Male Pups	7	5	5
No. Female Pups	5	6	6
Mean Body Weight, Grams:			
Males at 24 Hours	7	7	6
Females at 24 Hours	6	6	6
Males at Weaning	50	52	49
Females at Weaning	49	49	47

Table No. 2 - Continued

X-5120

	$P_1 \rightarrow F_{1B}$		
	CONTROL	1000 PPM	10,000 PPM
No. of Matings	20	20	20
No. of Pregnancies	20	19	20
Fertility Index	100%	95%	100%
No. of Litters Born	19	19	20
Gestation Index	95%	100%	100%
No. of Pups Born	232	244	273
No. of Pups Born Alive	232	243	271
Live Birth Index	100%	99.6%	99.3%
No. of Pups Left to Nurse	143	146	158
No. of Pups Weaned	129	133	136
Weaning Survival Index	90.2%	91.1%	86.1%
Mean Litter Size Born:			
No. Male Pups	6	7	7
No. Female Pups	7	6	7
Mean Body Weight, Grams:			
Male at 24 Hours	7	7	7
Females at 24 Hours	7	7	7
Males at Weaning	55	58	53
Females at Weaning	52	54	51

Table No. 2 - Continued

X-5120

	$P_2 \rightarrow F_{2A}$		
	CONTROL	1000 PPM	10,000 PPM
No. of Matings	20	20	20
No. of Pregnancies	17	18	20
Fertility Index	85%	90%	100%
No. of Litters Born	17	18	20
Gestation Index	100%	100%	100%
No. of Pups Born	201	219	260
No. of Pups Born Alive	201	219	256
Live Birth Index	100%	100%	98.5%
No. of Pups Left to Nurse	134	142	157
No. of Pups Weaned	128	136	139
Weaning Survival Index	95.5%	95.8%	88.5%
Mean Litter Size Born:			
No. Male Pups	6	6	7
No. Female Pups	6	6	6
Mean Body Weight Grams:			
Males at 24 Hours	7	7	7
Females at 24 Hours	7	7	6
Males at Weaning	53	52	51
Females at Weaning	51	50	49

Table No. 2 - Continued

X-5120

	$P_2 \rightarrow F_{2B}$		
	CONTROL	1000 PPM	10,000 PPM
No. of Matings	19	20	20
No. of Pregnancies	17	18	19
Fertility Index	89.5%	90%	95%
No. of Full-Term Pregnancies	9	10	11
No. of Litters Born	9	10	11
Gestation Index	100%	100%	100%
No. of Pups Born	104	140	120
No. of Pups Born Alive	101	140	120
Live Birth Index	97.1%	100%	100%
No. of Pups Left to Nurse	65	80	80
No. of Pups Weaned	62	76	80
Weaning Survival Index	95.4%	95%	100%
Mean Litter Size Born:			
No. Male Pups	5	8	6
No. Female Pups	6	6	7
Mean Body Weight, Grams:			
Males at 24 Hours	7	7	7
Females at 24 Hours	7	7	7
Males at Weaning	52	49	52
Females at Weaning	50	51	51

Table No. 3 - Uterine and litter data for rats serving as controls or receiving X-5120 which were sacrificed for Caesarean delivery

MATERNAL RAT NUMBER	DAYS OF GESTATION	IMPLANTATION SITES	RESORPTION SITES		NUMBER OF LIVE FETUSES		NUMBER OF DEAD FETUSES		LIVE FETUSES	
			LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	MEAN WEIGHT g.	MEAN LENGTH cm.
					CONTROL					
84-448	19-C	15	0	1	4	10	0	0	2.28	3.0
84-449	NP	-	-	-	-	-	-	-	-	-
84-454	19-C	12	2	0	8	2	0	0	2.09	2.9
84-457	19-C	14	1	0	4	9	0	0	2.38	3.0
84-459	19-C	13	0	2	9	2	0	0	2.04	3.1
84-462	19-C	16	0	2	3	11	0	0	2.10	3.0
84-463	19-C	11	0	1	2	8	0	0	2.45	3.1
84-464	19-C	8	0	0	8	0	0	0	2.25	3.1
Subtotal			3	6	38	42	0	0		
Total		89	9		80		0			
Mean		12.7	1.3		11.4		0		2.23	3.0
					1000 PPM					
84-476	NP	-	-	-	-	-	-	-	-	-
84-477	NP	-	-	-	-	-	-	-	-	-
84-478	19-C	19	0	0	13	6	0	0	2.06	2.9
84-479	19-C	19	0	0	7	12	0	0	2.31	3.0
84-481	19-C	10	0	0	3	7	0	0	2.40	3.1
84-482	19-C	19	0	1	5	13	0	0	2.20	3.0
84-483	19-C	13	1	0	4	8	0	0	2.42	3.0
84-484	19-C	14	1	1	5	7	0	0	2.16	2.9
84-486	19-C	17	1	1	6	9	0	0	2.28	3.0
84-489	19-C	13	1	1	4	7	0	0	2.26	3.0
Subtotal			4	4	47	69	0	0		
Total		124	8		116		0			
Mean		15.5	1.0		14.5		0		2.26	3.0

Table No. 3 - Continued

MATERNAL RAT NUMBER	DAYS OF GESTATION	IMPLANTATION SITES	RESORPTION SITES		NUMBER OF LIVE FETUSES		NUMBER OF DEAD FETUSES		LIVE FETUSES	
			LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	MEAN WEIGHT g.	MEAN LENGTH cm.
					10,000 PPM					
84-506	19-C	19	1	0	8	10	0	0	2.40	3.1
84-507	19-C	18	3	2	7	6	0	0	2.33	3.1
84-508	19-C	15	1	0	7	7	0	0	2.38	3.1
84-509	19-C	17	0	1	7	9	0	0	2.34	3.0
84-511	19-C	14	0	0	7	7	0	0	2.48	3.0
84-517	19-C	16	0	0	7	9	0	0	2.44	3.1
84-519	19-C	14	0	0	7	7	0	0	2.42	3.1
84-521	19-C	17	1	1	9	6	0	0	2.12	3.1
Subtotal			6	4	59	61	0	0		
Total		130	10		120		0			
Mean		16.2	1.3		15.0		0		2.36	3.1

Table No. 4 - Skeletal development of rat fetuses from litters of females serving as controls or receiving X-5120. Numbers in parentheses indicate number of fetuses evaluated.

	NUMBER OF FETUSES			PERCENT OF FETUSES		
	CONTROL (41)	1000 PPM (60)	10,000 PPM (62)	CONTROL (41)	1000 PPM (60)	10,000 PPM (62)
Skull						
Closure Grading:* 0	0	0	0			
1	0	0	0			
2	41	60	62	100	100	100
3	0	0	0			
4	0	0	0			
Interparietal Bone Split	2	4	3	5	7	5
Extra Ossification Center between Interparietal and Occipital Bones	2	4	2	5	7	3
Occipital Bone Irregular in Shape	0	1	2		2	3
Occipital Bone Underdeveloped	0	1	0		2	
Ribs						
Pairs 13	41	60	62	100	100	100
Small	0	0	1			2
Single**	0	0	1			2
Rudimentary Structure	3	1	4	7	2	6
Vertebrae						
Nonossified Centra:						
Total Number Nonossified						
Cervical 7	41	60	62	100	100	100
Thoracic 1	34	44	53	83	73	85
2	2	8	5	5	13	8
	(40)	(60)	(62)	(40)	(60)	(62)
Sacral 1	12	19	14	30	32	23
2	3	3	2	8	5	3
Caudal 23-24	8	12	13	20	20	21
25	8	10	15	20	17	24
26	24	38	34	60	63	55
Nonossified Dorsal Arches:						
Total Number Nonossified						
Sacral 1	13	13	31	33	22	50
2	20	38	16	50	63	26
3	3	7	2	8	12	3
Caudal 24-25	1	1	2	3	2	3
26	39	59	60	98	98	97
	(41)	(60)	(62)	(41)	(60)	(62)
Sternum						
Ossification Centers:						
Absent - 1st	14	16	18	34	27	29
2nd	28	52	32	68	87	52
3rd	14	17	15	34	28	24
4th	22	36	26	54	60	42
5th-6th	41	60	62	100	100	100

Table No. 4 - Continued

	NUMBER OF FETUSES			PERCENT OF FETUSES		
	CONTROL	1000 PPM	10,000 PPM	CONTROL	1000 PPM	10,000 PPM
	(41)	(60)	(62)	(41)	(60)	(62)
Small - 1st	13	23	11	32	38	18
2nd	13	8	22	32	13	35
3rd	11	24	10	27	40	16
4th	17	21	25	41	35	40
Split - 1st	0	0	2			3
2nd	0	0	4			6
3rd	7	4	13	17	7	21
4th	5	2	8	12	3	13
Pelvis						
Ossification Centers Absent:	(40)	(60)	(62)	(40)	(60)	(62)
Right Pubis	11	3	4	28	5	6
Left Pubis	16	6	6	40	10	10
Forepaws						
Ossification Centers:						
Total Number Absent -	(41)	(60)	(61)	(41)	(60)	(61)
Carpus 4	41	60	61	100	100	100
	(41)	(59)	(61)	(41)	(59)	(61)
Metacarpus 3-4	36	45	58	88	76	95
5-10	5	14	3	12	24	5
Phalanges 28	41	59	61	100	100	100
Hindpaws						
Ossification Centers:						
Total Number Absent -	(40)	(60)	(61)	(40)	(60)	(61)
Tarsus 4	40	60	61	100	100	100
	(40)	(58)	(61)	(40)	(58)	(61)
Metatarsus 3-4	37	55	60	93	95	98
5-10	3	3	1	8	5	2
Phalanges 28	40	58	61	100	100	100

24-MONTH DIETARY ADMINISTRATION - RATS

COMPOUND X-5120

FINAL REPORT

Submitted to

Specialty Chemicals Division
Allied Chemical Corporation
Buffalo, New York

TRW/HAZLETON LABORATORIES
9200 LEESBURG TURNPIKE • VIENNA, VIRGINIA • 22180

October 19, 1971

TRW
HAZLETON LABORATORIES

SPONSOR: Specialty Chemicals Division
Allied Chemical Corporation

DATE: October 19, 1971

MATERIAL: Compound X-5120

LOT NO: BC-76839

SUBJECT: FINAL REPORT
24-Month Dietary Administration - Rats
Project No. 165-126

SUMMARY OF FINDINGS

Compound X-5120 was fed to male and female albino rats for two years at levels of 500, 5000, and 50,000 ppm (0.05%, 0.5%, and 5.0%, respectively). A control group received the basal diet of Purina Laboratory Chow only.

Criteria evaluated for compound effect were physical appearance and behavior, growth, food consumption, survival, clinical laboratory values, organ weights, and gross and microscopic pathology.

No adverse compound effect was evident with regard to physical appearance, behavior, and survival.

Growth in the high level males and females (50,000 ppm) was significantly suppressed throughout the first year of the study. Growth for the remaining test groups was not significantly different from that for the respective controls. Food consumption during the first year was significantly reduced for high level males, and was significantly lower during the first 26 weeks for high level females. Food consumption was

similar for the remaining test groups and their respective controls. Differences in body weight and food consumption between the high level and control rats were considerably less distinct during the second year of the study, probably due to normal fluctuations of body weight brought on by increased age.

Evaluation of hematological, blood chemistry, and urine analysis data failed to reveal compound-related effect on trends at any dosage level in any of the parameters examined.

Observations at necropsy and microscopic examination of tissue sections revealed no grossly or microscopically demonstrable, compound-relatec changes in the organs and tissues of the test rats. Spontaneous aging changes in both the male and female rats were of comparable incidence and severity in the control and treated groups. Incidence and histologic appearance of the neoplasms observed were within expected limits for rats of this age and strain.

MATERIAL

Identification Compound X-5120; Lot No. BC-76839.

Description A fine, white, crystalline powder with a faint odor; water soluble.

Received From Allied Chemical Corporation on June 2, 1969.

Weeks Used Weeks 0-104 (termination).

Purity Assumed to be 100% active ingredient.

METHODS

Experimental Animals

Male and female Caesarean-derived albino rats of the Charles River strain.

Weight Range at Initiation: The males from 125 to 177 grams; the females from 107 to 149 grams.

Housing: Individually in elevated wire mesh cages.

Animal Groups and Treatment

The following groups of rats were used during the study.

Group No.	No. of Animals		Dietary Levels	
	male	female	ppm	%
1 (Control)	60	60	0	0
2	30	30	500	0.05
3	30	30	5,000	0.50
4	30	30	50,000	5.00

Sixty rats of each sex were used as controls and 30 rats of each sex per group were used in each test group for the first 26 weeks; at the 26 and 52 week intervals, 10 control rats of each sex and five test rats of each sex per group were sacrificed.

Administration of Test Material

The test compound was incorporated into the basal diet of Purina Laboratory Chow on a weight-per-weight basis and mixed in a twin-shell, Patterson-Kelley blender to provide the appropriate dietary level for each group.

Observations and Records

Daily Observations: For mortality.

Biweekly, Weekly, and Monthly Records: Individual body weights, weekly food consumption, and gross appearance and behavior of each animal were recorded weekly for the first 26 weeks, biweekly for the succeeding 26 weeks, and monthly for the final 52 weeks of the study. Observations of gross signs of toxicity and pharmacologic effects and the incidence, size, and location of tumors were recorded at the same intervals.

Clinical Studies

Intervals: At 13, 26, 52, and 104 weeks (five males and five females from each group).

Methods: Blood samples for all hematological determinations were obtained from the tail vein by tail clip and collected by the Unopet System. Blood samples for the blood chemistry determinations were obtained from the tail vein by tail clip (all intervals except termination) or from the abdominal aorta by arterial puncture (at termination only).

Hematology: Erythrocyte count, total and differential leukocyte counts, and hematocrit and hemoglobin determinations.

Biochemistry:

At 13 Weeks - Fasting blood sugar, blood urea nitrogen, total serum protein, total serum bilirubin, serum glutamic-pyruvic transaminase, serum alkaline phosphatase, and serum electrophoresis.

At 26, 52, and 104 Weeks - In addition to the above studies, serum albumin, serum sodium, serum potassium, serum chloride, carbon dioxide, serum calcium, and serum glutamic-oxaloacetic transaminase.

Urine Analyses (Pooled Samples): Specific gravity, pH, glucose, acetone, protein, bilirubin, and microscopic examination of sediment.

Terminal Studies

Necropsy was performed on any rat that died, and representative tissues were preserved. At 26 weeks and 12 months (52 weeks), 10 males and

10 females from the control group and five males and five females from each test group were selected for interim sacrifice. At termination, the remaining animals on the study were sacrificed.

Method: Exsanguination under Diabutal anesthesia.

Gross Observations: Recorded at necropsy for each rat.

Tissues Preserved From Each Rat: Brain, pituitary, thoracic spinal cord, eye, thyroid, lung, heart, liver, spleen, kidney, adrenal, stomach, pancreas, small intestine, large intestine, mesenteric lymph node, urinary bladder, testis with epididymis, seminal vesicle, ovary, uterus, skin, rib junction, bone marrow, nerve with muscle, and unusual lesions.

Preservative: All tissues were preserved in 10% neutral buffered formalin.

Organ Weights

For Each Rat: Heart, liver, spleen, kidneys, and testes with epididymis weighed prior to fixation. Organ/body weight ratios were determined.

Microscopic Examination

The following tissues from the control and high level test rats were examined microscopically: pituitary, thyroid, heart, liver, spleen, kidneys, adrenal, stomach, pancreas, small intestine, large intestine, mesenteric lymph node, urinary bladder, testis, ovary, bone marrow, and unusual lesions.

The following tissues from the low and intermediate level rats were examined microscopically: liver, kidneys, and unusual lesions.

Statistical Evaluation

Criteria: Growth, total food consumption, and survival at 12 months; terminal body weights, organ weights, and organ/body weight ratios.

Methods: Life-table technique for survival; analysis of variance, or F-test, for the remaining criteria (at the 5.0% probability level); preliminary tests (where applicable) by methods of Rao, Bartlett, Scheffe, and Fisher-Behrens (modified t-test).

References: Ostle, B., Statistics in Research, Iowa State College Press, Ames, Iowa, 1956; Rao, C. R., Biometrics 14, 1, 1958; Snedecor, G. W., Statistical Methods, Iowa State College Press, Ames, Iowa, 1956; and Sachs, R., Toxicol. Appl. Pharmacol. 1, 203, 1959.

RESULTS

Appearance and Behavior

The appearance and behavior of the test rats at the various dietary levels were generally similar to that of the controls during the first year of the study. Throughout the study, the incidence of respiratory involvement (wheezing, red eyelids, bloody crust on the eyes or nose, nasal discharge, and rapid or labored respiration) was highest in the male controls and lowest in the high level males. During the first year, hunched appearance and/or alopecia were observed in numerous animals from all groups, predominantly in the high level rats of either sex. During the second year, these two signs were seen

in most animals from all groups. Lacrimation and rough fur were noted in several control and test rats throughout the study. Sores on the tail or paws were noted in increasing numbers of rats, particularly males, of all groups as the study progressed. Six high level male rats exhibited protruding eyes during the second year of the study. Protruding eyes were not observed in males of any other group; however, a few females from each test group and the controls exhibited this sign during the second year of the study. Urine stains were observed in a few animals from each group, with the highest incidence among control rats. One control male exhibited poor coordination of the hind limbs during Week 52, and another control male and one high level female showed limited use of the hindquarters during the final weeks before the terminal sacrifice. One Group No. 3 male showed spastic movements of the head when handled. This finding was first noted during Week 21 and appeared, along with occasional convulsions after handling, intermittently until Week 72. After Week 72, the animal showed no further episodes of spastic movements or convulsions. One control female showed an opaque right eye during the study, beginning at Week 38. Other incidental signs seen in only a few control and test animals included squinting, swelling or cyanosis in the extremities, pale or thin appearance, and spinning behavior.

The following number of animals exhibited externally palpable nodules or tissue masses.

Group No.	No. of Animals			
	First Year		Second Year	
	male	female	male	female
1	2	5	6	23
2	2	2	4	10
3	0	4	2	12
4	1	0	7	5

Growth, Food Consumption, and Survival

Mean body weights, weight ranges, food consumption, and survival data are presented in Table No. 1. Growth and food consumption for the first year are presented graphically in Figure No. 1; compound consumption for the first year is presented in Figure No. 2.

Growth in the high level males and females (Group No. 4 - 50,000 ppm) was significantly suppressed throughout the first year of the study. Growth for the remaining test groups was not significantly different from that for the respective controls.

By statistical analysis, total food consumption (Weeks 0 - 52) for the high level males was significantly reduced. Total food consumption for the high level females (Weeks 0 - 52) was also lower than the control, but not to a significant degree. (Food consumption for the high level females from Weeks 0 - 26 was significantly lower than the control.) Food consumption was similar for the remaining test groups and their respective control groups.

Trends toward significantly decreased body weight and food consumption for high level animals observed during the first year, continued to a lesser degree during the second year of the study. Due to normal fluctuations of body weight which coincide with increased age in rats, differences in body weight and food consumption between the high level and control rats were less distinct during the second year of the study. Body weights of high level females were generally lower at termination than those of the controls, but not to a significant degree; high level males showed terminal body weights similar to those of the control males.

Survival in the test groups was not adversely affected. In fact, significantly more high level males than control males survived throughout the 104-week test period. Survival data at 104 weeks (termination) are presented below.

Group No.	Mean Survival Time - Days		Percent Survival at 104 Weeks	
	male	female	male	female
1 (Control)	620.4	667.4	38.3	55.0
2	561.5	672.7	30.7	50.0
3	672.5	668.0	30.0	55.6
4	704.6	704.7	80.9	75.0

Clinical Laboratory Studies

The results of these studies are presented in Tables No. 2 (hematological values), No. 3 (biochemical values), and No. 4 (results of urine analysis).

Results of hematological and blood chemistry tests and of urine analysis did not reveal any alterations in any of the parameters examined which could be attributed to the ingestion of the test compound. Data for treated rats at each of the three dietary levels generally were comparable with respective control data. Occasional changes for some of the parameters tested were inconsistent and are considered to be incidental.

Gross Observations and Necropsy

No consistent gross changes were noted in the organs of the test rats at-death, interval necropsy, or terminal sacrifice that could be attributed to ingestion of the test material. Gross findings noted in test animals were generally similar to those observed in control rats.

These findings included enlarged, cystic, nodular and/or discolored pituitaries; speckled, discolored and/or enlarged adrenals; enlarged thyroids; dark red indentations in the liver; nutmeg or yellow discolorations of the liver; distended, consolidated, abscessed, and/or discolored (red areas) on the lungs; thickening and/or dark red discolorations of the stomach mucosa; soft and blue testes; watery cysts on the ovary, and abnomalities of the kidneys consisting of dark pink or red discolorations of the outer medulla; striations, dark zones between the renal cortex and medulla; dilation of the renal pelves; enlargement, poor differentiation between the renal cortex and medulla; and occasionally, cysts in the kidney.

Other incidental findings occurring in only a few controls and/or test animals included prominent parathyroids, cysts, nodules or purulent material in the uterus, red irritation in the urinary bladder walls, seminal vesicles small, firm blue nodules throughout the pancreas, small and pale spleen, black material in the gastrointestinal tract, enlarged cervical lymph nodes, nodules in the liver, and occasional hyperactivity of the mammary gland.

Organ Weights

Mean terminal body weights, organ weights, organ/body weight ratios, and their standard deviations for animals sacrificed at 26, 52, and 104 weeks (termination) are presented in Table No. 5.

Statistical analysis revealed the following significant differences in test groups when compared to controls: At the 26-week interval sacrifice, Group No. 4 males showed significantly lower thyroid ratios and Group No. 4 females showed significantly lower heart weights and terminal body weights than did the control animals. At the 52-week interval sacrifice, Group No. 4 males exhibited significantly higher testes ratios and significantly lower liver weights, and Group No. 4 females showed significantly lower terminal body weights than did the controls. At termination (104 weeks), Group No. 4 females showed significantly lower thyroid weights, and Group No. 4 males exhibited significantly higher spleen weights and significantly lower kidney ratios than did the control animals. The differences in organ weight data observed at the

interval and terminal sacrifices were considered to be incidental since they were not supported by compound-related, histopathological alterations in the organs of the test rats.

Microscopic Pathology

Histopathological evaluation of tissue sections was performed by Richard W. Voelker, Jr., D.V.M., Ph.D., Consultant Pathologist. Table No. 6 is a record of histopathology incidence by individual animal for each interval sacrifice and the terminal sacrifice, and his summary follows.

Microscopic evaluation failed to reveal compound related changes in tissues examined. Spontaneous aging changes observed in the pituitary glands of both the control and treated rats consisted of chromophobe hypertrophy, chromophobe hyperplasia, vascular ectasis, occasional microcysts, and chromophobe adenomas which were most prevalent in the female rats. Sections of adrenal gland revealed focal to diffuse cortical cell hypertrophy, vacuolar degeneration, and vascular ectasia which in several animals apparently resulted in thrombus formation. Pheochromocytomas were observed in the adrenal medulla of two of the control male rats. Thyroid gland activity based on size of follicles and appearance of the follicular epithelium was comparable in the control and treated rats. Thyroid carcinoma was present in one of the control females. Focal to diffuse areas of myocardial fibrosis were commonly observed in the male rats with a lesser incidence in the females.

Spontaneous alterations observed in liver sections of both control and treated rats with essentially comparable incidence and severity were nonsuppurative pericholangitis, bile duct proliferation, and occasional focal areas

of hepatocyte hypertrophy in which increased cytoplasmic vacuolation was evident. A parasitic cyst containing a larval tapeworm was present in one of the high level males.

Kidney sections revealed a variable degree of interstitial nephritis which was most severe in the male rats and was characterized by interstitial fibrosis, regenerative tubule epithelium, mononuclear cell infiltrate and dilated tubules containing proteinaceous casts. Renal calculus formation was noted in one of the control females. Congestion, primarily at the cortico-medullary junction was a rather constant finding in both control and treated groups.

Sections of the gastrointestinal tract were essentially not remarkable except for mineralization and hemorrhage in the mucosa in one of the control males in which severe nephritis was present with the gastric changes apparently resulting from uremia. In addition, periarteritis was noted on one of the high level males involving muscular arteries in the stomach wall. Other random findings consisted of occasional small areas of ulceration and acanthosis. Sections of pancreas revealed lesions of periarteritis involving muscular arteries as a spontaneous disease lesion in occasional animals of both control and treated groups.

Sections of testis revealed normal spermatogenic activity in most animals of both the control and high level test groups. A large discreet interstitial cell tumor was present in the testis of one of the control males,

periarteritis was noted in single animals of both the control and high level test groups and two of the high level males revealed testicular atrophy with reduction in spermatogenic activity. Testes from the remaining eight high level males were histologically normal. Sections of ovary from the control and high level test females revealed occasional incidence of salpingitis in the Fallopian tube adjacent to the ovary and rare follicular cysts. Occasionally, open spaces were noted surrounding the ovaries, apparently paraovarian cysts which occur rather routinely in aged rats.

Unusual lesions observed in the male rats included cutaneous ulcers on the paws, atrophy of seminal vesicles in one of the control males, subcutaneous abscess formation, and tissue masses which included single cases of fibroma, sarcoma, and keratoacanthoma. Tissue masses were much more common in the female rats arising primarily in mammary gland tissue and consisted of one or more mammary gland fibroadenomas in nine of the 10 control females, three of five (Group No. 2), two of five (Group No. 3), and three of 10 high level females. In addition to the benign mammary tumors, adenocarcinomas were observed in three of the contol females. Pathologic changes noted in the uterus consisted of endometrial polyps, cystic endometrial hyperplasia and metritis. Addition unusual lesions consisted of hemangiopericytoma in one of the high level females (Rat No. 81-260) and epidermal inclusion cysts in one of the Group No. 3 females.

The following tissues were eesentially not remarkable and comparable in appearance between the control and treated rats: spleen, mesenteric lymph nodes, urinary bladder, and bone marrow.

In conclusion, dietary administration of the test Compound X-5120 at levels of 500 ppm (Group No. 2), 5000 ppm (Group No. 3), and 50,000 ppm (Group No. 4) for a period of 104 weeks failed to cause microscopically demonstrable, compound-related changes in the tissues examined. Spontaneous aging changes in both the male and female rats were of comparable incidence and severity in the control and treated groups. Incidence and histologic appearance of the neoplasms observed were within expected limits for rats of this age and strain.

Submitted by William A. Olson

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Pathology by Richard W. Voelker

RICHARD W. VOELKER, Jr., D.V.M., Ph.D.
Consultant Pathologist

Report Preparation: Spruill
Supervision: Fink/Elliott

gbb;dc

NOTE: The research described in this report involved animals maintained in animal care facilities fully accredited by the American Association for Accreditation of Laboratory Animal Care.

EXPLANATION OF FOOTNOTES

Key to urine analysis table is as follows:

T = trace (±)

0 = negative

1 = slight (+)

2 = moderate (++)

3 = marked (+++)

4 = severe (++++)

TNTC = too numerous to count

165-12.6
2

Table No. 1 – Mean body weights, weight ranges, food consumption, and survival data for (☒ male, ☐ female) albino rats.

ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS

TIME INTERVAL	GROUP 1				GROUP 2				GROUP 3				GROUP 4			
	WT.	WT. RANGE	FOOD	SURV.	WT.	WT. RANGE	FOOD	SURV.	WT.	WT. RANGE	FOOD	SURV.	WT.	WT. RANGE	FOOD	SURV.
weeks	g.	g.	g.		g.	g.	g.		g.	g.	g.		g.	g.	g.	
0	151	127-175	0	60/60	151	126-177	0	30/30	150	125-173	0	30/30	151	127-172	0	30/30
1	206	170-244	141	60/60	204	152-240	140	30/30	200	164-231	136	30/30	175	127-204	121	30/30
2	255	210-303	162	60/60	255	186-302	160	30/30	251	215-295	163	30/30	220	129-260	150	30/30
4	342	272-405	173	60/60	344	240-403	182	30/30	340	294-409	177	30/30	297	184-343	161	30/30
8	432	334-500	148	60/60	433	336-510	152	30/30	417	327-507	155	30/30	366	265-440	138	30/30
12	487	370-580	168	59/60	485	383-585	167	30/30	469	361-583	170	30/30	400	282-500	145	30/30
16	518	380-616	165	59/60	523	409-640	172	30/30	502	391-622	173	30/30	433	277-552	156	30/30
20	535	393-638	167	59/60	547	444-670	172	30/30	535	408-652	168	30/30	458	333-585	152	30/30
24	557	418-685	154	59/60	571	457-694	156	30/30	560	417-679	161	30/30	473	346-607	138	30/30
28	570	424-702	165	49/50	584	504-714	166	25/25	578	434-705	164	25/25	487	356-624	146	25/25
32	591	442-740	171	49/50	598	513-730	170	25/25	587	446-714	161	25/25	501	390-637	155	25/25
36	609	461-763	163	49/50	611	516-747	159	25/25	603	450-732	164	25/25	513	407-650	144	25/25
40	625	466-800	157	49/50	624	511-763	158	25/25	614	471-741	160	25/25	522	422-673	145	25/25
44	633	475-799	155	48/50	640	533-777	159	23/25	624	474-748	159	25/25	531	425-674	144	25/25
48	634	488-800	162	47/50	641	533-759	165	23/25	628	455-758	170	25/25	535	437-664	155	25/25
52	640	493-827	148	47/50	643	524-781	146	23/25	637	477-762	155	25/25	544	447-671	140	24/25
56	631	455-760	148	37/40	635	480-796	148	16/20	631	461-762	157	20/20	548	414-659	138	19/20
60	640	487-764	148	37/40	625	431-809	142	15/20	642	496-771	158	20/20	557	462-672	146	19/20
64	629	482-757	150	36/40	625	396-814	152	14/20	616	498-702	157	19/20	559	456-657	147	19/20
68	619	486-751	157	36/40	615	382-784	158	14/20	614	490-691	171	19/20	545	392-628	163	19/20
72	615	492-747	154	36/40	624	522-780	154	13/20	622	452-708	175	19/20	555	452-641	161	19/20
76	596	458-712	148	26/40	585	462-701	152	10/20	611	528-708	172	17/20	533	386-643	154	19/20
80	591	478-708	170	26/40	601	462-710	170	10/20	612	532-704	188	17/20	525	364-655	169	19/20
84	586	336-716	168	25/40	603	489-729	169	8/20	603	513-694	175	17/20	537	417-660	179	18/20
88	600	432-722	159	22/40	591	424-719	151	8/20	613	515-697	169	17/20	541	387-682	169	18/20
92	567	371-699	152	21/40	614	480-711	153	7/20	611	500-700	168	16/20	538	361-675	164	18/20
96	542	344-667	139	21/40	567	400-692	139	6/20	596	470-703	167	15/20	518	330-685	158	18/20
100	522	310-660	142	19/40	553	350-690	144	6/20	574	440-695	154	10/20	511	340-691	162	18/20
104	510	299-698	130	15/40	537	324-692	144	6/20	595	553-692	167	6/20	519	337-672	156	16/20

165-126
3

Table No. 1 – Mean body weights, weight ranges, food consumption, and survival data for (☐ male, ☒ female) albino rats.

ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS

TIME INTERVAL	GROUP 1				GROUP 2				GROUP 3				GROUP 4			
	WT.	WT. RANGE	FOOD	SURV.	WT.	WT. RANGE	FOOD	SURV.	WT.	WT. RANGE	FOOD	SURV.	WT.	WT. RANGE	FOOD	SURV.
weeks	g.	g.	g.		g.	g.	g.		g.	g.	g.		g.	g.	g.	
0	125	107-149	0	60/60	125	107-150	0	30/30	125	107-150	0	30/30	125	108-150	0	30/30
1	161	135-190	117	60/60	159	132-180	116	30/30	157	137-187	115	30/30	142	126-168	104	30/30
2	180	156-205	124	60/60	181	150-205	130	30/30	180	152-215	128	30/30	161	137-186	127	30/30
4	214	180-254	128	60/60	218	166-252	124	30/30	216	181-260	125	30/30	191	162-229	122	30/30
8	251	210-303	108	60/60	254	182-310	108	30/30	251	210-312	108	30/30	219	185-273	101	30/30
12	275	224-333	119	60/60	276	204-350	117	30/30	271	215-343	120	30/30	237	203-270	111	30/30
16	289	232-362	119	60/60	289	220-383	123	30/30	282	226-343	121	30/30	247	200-295	113	30/30
20	304	241-397	125	60/60	306	233-418	128	30/30	298	233-374	122	30/30	255	213-303	115	30/30
24	319	248-418	120	60/60	323	243-445	117	30/30	313	253-407	109	30/30	266	222-315	106	30/30
28	323	252-445	122	50/50	328	244-475	121	25/25	318	250-417	114	25/25	267	221-308	106	25/25
32	331	253-455	122	50/50	332	250-470	120	25/25	321	260-411	108	25/25	270	233-313	112	25/25
36	343	266-469	128	50/50	353	256-528	129	25/25	336	264-435	124	25/25	279	236-321	118	25/25
40	357	278-474	116	50/50	365	262-541	123	25/25	347	275-468	110	25/25	285	244-329	111	25/25
44	365	272-510	123	50/50	367	260-568	115	25/25	349	200-478	114	25/25	285	240-330	108	25/25
48	368	275-513	121	50/50	379	267-588	124	25/25	360	277-493	120	24/25	288	240-337	112	25/25
52	379	267-519	114	50/50	387	270-605	113	25/25	370	290-503	112	24/25	298	242-355	107	25/25
56	383	275-524	121	39/40	390	270-617	115	20/20	380	306-528	122	19/20	299	241-362	109	20/20
60	395	279-543	121	38/40	397	277-620	116	20/20	385	321-544	120	19/20	305	252-362	108	20/20
64	397	287-536	121	38/40	402	281-623	121	20/20	362	250-461	131	19/20	318	255-378	118	20/20
68	400	292-525	130	36/40	396	271-628	131	20/20	367	267-494	132	18/20	315	249-383	129	20/20
72	404	292-532	127	36/40	397	267-612	121	20/20	377	258-496	131	18/20	321	246-390	113	20/20
76	407	298-568	133	34/40	394	268-595	118	18/20	372	309-498	130	18/20	323	250-390	116	19/20
80	404	300-570	144	34/40	388	272-546	133	18/20	377	271-509	146	17/20	325	247-393	126	19/20
84	406	283-540	140	32/40	389	207-530	133	18/20	381	302-515	137	17/20	326	252-409	140	19/20
88	411	296-550	133	30/40	410	269-510	137	16/20	377	280-526	123	16/20	330	244-438	123	19/20
92	415	267-547	135	29/40	400	234-510	130	14/20	370	298-527	118	16/20	333	245-444	126	17/20
96	408	302-561	131	28/40	417	326-507	124	12/20	361	274-498	112	14/20	335	253-440	119	17/20
100	408	279-567	127	27/40	398	272-507	115	11/20	365	253-456	119	11/20	337	244-459	122	16/20
104	402	293-602	109	22/40	410	325-530	118	10/20	350	241-418	110	11/20	348	251-483	123	15/20

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB G%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	80976	M	48.0	15.5	6.65	16.7	0	0	7	90	2	1	0
1	80977	M	39.0	12.0	5.64	30.9	0	0	18	78	2	2	0
1	80978	M	45.0	15.0	6.15	24.8	0	0	11	82	4	3	0
1	80979	M	49.0	15.5	6.58	14.8	0	0	11	85	2	2	0
1	80980	M	46.0	16.0	6.76	14.8	0	0	11	86	1	2	0
GROUP MEAN			45.4	14.8	6.36	20.4							
2	81096	M	47.0	13.2	6.34	15.4	0	0	19	72	4	5	0
2	81097	M	47.0	15.3	7.00	20.4	0	0	10	87	1	2	0
2	81098	M	42.0	12.7	6.59	27.2	0	0	28	68	3	1	0
2	81099	M	44.0	13.5	6.69	13.2	0	0	25	66	1	8	0
2	81100	M	45.0	13.4	6.32	39.0	0	0	7	91	2	0	0
GROUP MEAN			45.0	13.6	6.59	23.0							
3	81156	M	49.0	14.0	6.28	12.8	0	0	13	83	2	2	0
3	81157	M	47.0	14.2	6.63	14.8	0	0	18	80	0	2	0
3	81158	M	42.0	13.4	6.80	23.6	0	0	37	62	1	0	0
3	81159	M	49.0	14.6	6.72	16.1	0	0	25	70	1	4	0
3	81160	M	49.0	15.3	6.59	17.1	0	0	17	79	0	4	0
GROUP MEAN			47.2	14.3	6.60	16.9							
4	81216	M	48.0	15.8	6.55	14.1	0	0	26	67	0	7	0
4	81217	M	47.0	14.6	6.99	12.9	0	0	21	73	3	3	0
4	81218	M	44.0	14.4	6.73	27.9	0	0	14	77	3	6	0
4	81219	M	48.0	14.2	6.69	14.7	0	0	21	77	0	2	0
4	81220	M	49.0	15.0	6.87	21.7	0	0	20	78	1	1	0
GROUP MEAN			47.2	14.8	6.77	18.3							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB G%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	81036	F	50.0	14.4	6.83	12.5	0	0	19	73	2	6	0
1	81037	F	48.0	15.0	6.94	13.6	0	0	27	67	4	2	0
1	81038	F	47.0	14.8	7.27	10.7	0	0	11	84	3	2	0
1	81039	F	47.0	14.6	6.66	12.2	0	0	13	81	2	4	0
1	81040	F	47.0	14.2	6.83	8.7	0	0	16	76	1	7	0
GROUP MEAN			47.8	14.6	6.91	11.5							
2	81126	F	46.0	13.7	6.47	14.8	0	0	23	75	1	1	0
2	81127	F	51.0	15.8	7.51	17.7	0	0	12	86	2	0	0
2	81128	F	49.0	14.0	6.68	10.3	0	0	15	81	3	1	0
2	81129	F	48.0	15.3	7.39	18.2	0	0	16	77	1	6	0
2	81130	F	46.0	16.0	7.26	11.7	0	0	14	78	2	6	0
GROUP MEAN			48.0	15.0	7.06	14.5							
3	81186	F	47.0	15.3	6.22	13.0	0	0	11	86	1	2	0
3	81187	F	48.0	14.8	6.95	20.1	0	0	19	77	2	2	0
3	81188	F	47.0	15.0	7.18	13.9	0	0	18	74	4	4	0
3	81189	F	47.0	14.6	7.30	15.4	0	0	27	73	0	0	0
3	81190	F	50.0	15.8	7.59	19.3	0	0	25	70	2	3	0
GROUP MEAN			47.8	15.1	7.05	16.3							
4	81246	F	46.0	14.0	6.46	16.9	0	0	20	79	0	1	0
4	81247	F	51.0	15.3	7.75	17.3	0	0	13	86	1	0	0
4	81248	F	49.0	14.8	7.90	15.0	0	0	25	67	6	2	0
4	81249	F	47.0	14.6	7.31	16.1	0	0	10	87	1	2	0
4	81250	F	45.0	12.2	7.72	12.2	0	0	9	87	2	2	0
GROUP MEAN			47.6	14.2	7.43	15.5							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB G%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	80976	M	46.0	15.0	6.33	9.9	0	0	17	78	2	3	0
1	80977	M	44.0	15.8	6.78	18.6	0	0	22	75	0	3	0
1	80978	M	46.0	16.4	7.70	10.8	0	0	17	75	0	8	0
1	80979	M	44.0	16.6	7.00	12.8	0	0	13	85	0	2	0
1	80980	M	47.0	16.0	7.22	12.2	0	0	15	82	0	3	0
GROUP MEAN			45.4	16.0	7.01	12.9							
2	81096	M	42.0	14.2	6.22	14.9	0	0	24	73	0	3	0
2	81097	M	45.0	16.8	7.42	17.6	0	0	26	70	0	4	0
2	81098	M	44.0	16.2	6.87	11.7	0	0	17	83	0	0	0
2	81099	M	44.0	15.5	7.23	15.5	0	0	35	59	0	6	0
2	81100	M	43.0	14.6	6.71	10.7	0	0	10	88	0	2	0
GROUP MEAN			43.6	15.5	6.89	14.1							
3	81156	M	48.0*	10.5*	7.64	15.1	0	0	18	75	0	7	0
3	81157	M	42.0	14.0	7.67	13.8	0	0	15	81	0	4	0
3	81158	M	49.0	16.8	8.11	20.2	0	0	30	66	0	4	0
3	81159	M	48.0	16.8	7.51	14.8	0	0	18	78	0	4	0
3	81160	M	49.0	17.2	8.15	14.7	0	0	25	72	0	3	0
GROUP MEAN			47.0	16.2	7.82	15.7							
4	81216	M	50.0	16.0	8.46	18.8	0	0	27	66	0	7	0
4	81217	M	45.0	15.5	8.03	14.6	0	0	20	77	0	3	0
4	81218	M	48.0	14.4	8.12	15.3	0	0	7	91	0	2	0
4	81219	M	45.0	15.5	7.79	13.3	0	0	20	80	0	0	0
4	81220	M	47.0	16.0	7.20	20.9	0	0	22	77	0	1	0
GROUP MEAN			47.0	15.5	7.92	16.6							

* = VALUE NOT INCLUDED IN MEAN

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB G%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	81036	F	47.0	16.4	6.89	15.2	0	0	23	74	0	3	0
1	81037	F	46.0	15.5	8.12	11.3	0	0	20	79	0	1	0
1	81038	F	45.0	14.6	7.35	14.7	0	0	33	66	0	1	0
1	81039	F	46.0	15.5	7.96	15.3	0	0	11	86	0	4	0
1	81040	F	45.0	15.8	7.10	14.9	0	1	34	58	1	5	1
GROUP MEAN			45.8	15.6	7.48	14.3							
2	81126	F	47.0	15.5	7.14	12.4	0	0	13	85	0	2	0
2	81127	F	48.0	17.0	7.35	12.2	0	0	27	69	0	4	0
2	81128	F	47.0	16.4	7.77	16.9	0	0	21	76	0	3	0
2	81129	F	48.0	15.5	7.23	13.3	0	0	21	73	0	6	0
2	81130	F	46.0	16.4	6.87	17.7	0	0	18	76	0	6	0
GROUP MEAN			47.2	16.2	7.27	14.5							
3	81186	F	46.0	16.4	7.77	13.0	0	0	22	78	0	0	0
3	81187	F	42.0	16.2	7.87	16.2	0	0	12	83	0	5	0
3	81188	F	40.0	14.8	8.10	13.8	0	0	25	70	1	4	0
3	81189	F	45.0	14.6	6.81	9.3	0	0	11	85	1	3	0
3	81190	F	46.0	16.4	6.88	15.5	0	1	24	75	0	0	0
GROUP MEAN			43.8	15.7	7.49	13.6							
4	81246	F	45.0	16.0	7.07	14.2	0	0	23	74	0	3	0
4	81247	F	48.0	17.2	6.65	12.2	0	0	20	73	0	7	0
4	81248	F	46.0	16.0	7.23	14.8	0	1	30	65	0	4	0
4	81249	F	45.0	16.4	6.61	11.8	0	0	20	77	0	3	0
4	81250	F	46.0	15.8	7.15	12.6	0	0	23	77	0	0	0
GROUP MEAN			46.0	16.3	6.94	13.1							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	80976	M	49.0	15.3	7.52	17.8	0	0	21	77	0	2	0
1	80977	M	44.0	13.5	7.68	16.1	0	0	29	70	0	1	0
1	80978	M	49.0	16.0	6.58	15.0	0	0	18	80	0	2	0
1	80979	M	50.5	16.0	7.84	16.3	0	0	24	70	0	6	0
1	80980	M	52.0	15.9	7.47	26.3	0	0	37	57	3	3	0
GROUP MEAN			48.9	15.3	7.42	18.3							
2	81096	M	52.0	15.5	8.41	12.1	0	0	39	61	0	0	0
2	81097	M	49.0	15.5	8.03	20.5	0	0	28	68	1	3	0
2	81098	M	47.0	14.4	8.23	17.0	0	0	23	69	0	8	0
2	81099	M	48.0	14.0	7.60	12.7	0	1	43	51	0	5	0
2	81100	M	48.0	14.2	7.48	20.5	0	0	13	85	0	2	0
GROUP MEAN			48.8	14.7	7.95	16.6							
3	81156	M	45.0	14.2	7.33	12.3	0	0	17	79	1	3	0
3	81157	M	46.5	14.6	7.40	11.4	0	0	41	55	2	2	0
3	81158	M	47.0	15.5	7.97	16.2	0	0	35	61	0	4	0
3	81159	M	46.0	14.6	7.83	15.3	0	0	18	75	0	7	0
3	81160	M	47.0	15.0	7.08	15.1	0	0	34	60	3	3	0
GROUP MEAN			46.3	14.8	7.52	14.1							
4	81216	M	49.0	15.3	7.32	14.2	0	0	38	56	1	5	0
4	81217	M	47.0	14.4	7.40	13.9	0	0	23	71	0	6	0
4	81218	M	46.0	14.6	7.03	14.3	0	0	22	75	0	3	0
4	81219	M	47.0	14.0	6.64	17.6	0	0	31	63	2	4	0
4	81220	M	47.0	14.0	7.27	24.4	0	0	14	84	1	1	0
GROUP MEAN			47.2	14.5	7.13	16.9							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	81036	F	43.5	13.2	6.50	18.2	0	0	47	50	2	1	0
1	81037	F	45.0	14.0	6.67	12.8	0	0	29	70	0	1	0
1	81038	F	43.0	14.0	7.39	13.2	0	0	28	70	0	2	0
1	81039	F	44.0	13.7	6.07	12.7	0	0	20	77	0	3	0
1	81040	F	47.0	13.5	6.68	10.8	0	0	22	71	0	7	0
GROUP MEAN			44.5	13.7	6.66	13.5							
2	81126	F	44.0	14.0	6.87	11.8	0	0	28	71	0	1	0
2	81127	F	46.0	14.2	6.89	17.5	0	0	40	58	1	1	0
2	81128	F	48.0	15.5	7.03	8.5	0	0	31	69	0	0	0
2	81129	F	42.0	13.7	6.32	14.4	0	0	43	56	0	1	0
2	81130	F	44.0	13.7	6.76	9.6	0	0	28	67	1	4	0
GROUP MEAN			44.8	14.2	6.77	12.4							
3	81186	F	44.0	14.1	6.69	14.2	0	0	18	79	1	2	0
3	81187	F	45.0	14.6	7.08	24.0	0	0	34	62	3	1	0
3	81188	F	49.0	16.4	7.42	7.8	0	0	19	77	1	3	0
3	81189	F	45.0	14.6	6.92	10.4	0	0	24	76	0	0	0
3	81190	F	47.0	15.5	6.27	11.4	0	0	39	57	0	4	0
GROUP MEAN			46.0	15.0	6.88	13.6							
4	81246	F	45.0	14.4	5.78	13.1	0	0	26	68	3	3	0
4	81247	F	47.0	14.8	6.66	19.8	0	0	24	73	0	3	0
4	81248	F	44.0	14.6	7.26	9.0	0	0	22	71	2	5	0
4	81249	F	44.0	14.4	6.87	18.8	0	0	24	71	4	1	0
4	81250	F	46.0	14.2	6.98	15.6	0	0	15	81	3	1	0
GROUP MEAN			45.2	14.5	6.71	15.3							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	80976	M	48.5	15.6	8.89	16.5	0	0	39	60	0	1	0
1	80978	M	57.0	17.2	8.63	34.5	0	0	32	65	0	2	1
1	80979	M	48.5	16.5	8.05	16.4	0	0	36	60	0	4	0
1	80980	M	41.0	12.7	6.80	30.3	0	0	48	50	1	1	0
1	80981	M	39.0	13.4	6.68	26.5	0	0	45	53	1	1	0
GROUP MEAN			46.8	15.1	7.81	24.8							
2	81098	M	47.0	15.0	8.63	20.9	0	1	45	50	0	4	0
2	81099	M	46.0	13.9	7.73	34.5	0	0	72	25	0	3	0
2	81106	M	60.0	18.2	10.00	22.6	0	0	50	46	0	4	0
2	81108	M	46.0	15.2	6.95	20.5	0	0	53	46	0	1	0
2	81109	M	40.0	12.7	6.28	45.4	0	0	58	40	0	2	0
GROUP MEAN			47.8	15.0	7.92	28.8							
3	81156	M	45.0	15.2	7.40	15.5	0	0	26	73	0	1	0
3	81161	M	45.5	14.2	7.47	28.9	0	0	73	25	1	1	0
3	81163	M	47.0	16.1	6.28	19.2	0	0	61	31	0	8	0
3	81166	M	44.0	12.8	5.23	23.6	0	1	80	19	0	0	0
3	81173	M	46.0	14.4	7.75	22.7	0	1	32	63	0	4	0
GROUP MEAN			45.5	14.5	6.83	22.0							
4	81216	M	47.0	14.6	7.03	17.3	0	0	58	40	1	1	0
4	81217	M	44.0	12.5	7.05	38.0	0	0	76	22	1	1	0
4	81218	M	48.0	15.9	7.30	30.7	0	0	56	40	0	3	1
4	81220	M	50.0	15.4	7.20	25.2	0	0	57	42	0	1	0
4	81221	M	57.0	16.5	7.46	22.5	0	0	49	50	0	1	0
GROUP MEAN			49.2	15.0	7.21	26.7							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	81036	F	45.0	12.7	6.76	26.5	0	0	73	23	0	3	1
1	81037	F	44.0	13.0	6.40	22.7	0	0	47	52	0	1	0
1	81040	F	53.0	16.3	6.88	16.0	0	0	24	75	0	0	1
1	81042	F	53.0	16.9	8.38	21.2	0	0	48	51	1	0	0
1	81045	F	48.0	16.1	5.24	11.9	0	0	32	64	0	3	1
GROUP MEAN			48.6	15.0	6.73	19.7							
2	81126	F	44.0	12.7	6.20	12.1	0	0	59	40	0	1	0
2	81130	F	49.0	15.9	7.64	12.2	0	0	28	66	2	4	0
2	81132	F	49.0	14.6	7.03	34.0	0	1	40	57	0	2	0
2	81134	F	50.0	15.4	7.28	8.9	0	0	38	62	0	0	0
2	81136	F	48.0	14.4	7.48	20.0	0	0	32	64	0	3	1
GROUP MEAN			48.0	14.6	7.13	17.4							
3	81186	F	46.0	15.0	6.84	26.5	0	0	48	47	0	5	0
3	81187	F	37.5	11.8	5.48	20.0	0	0	32	64	0	4	0
3	81188	F	77.0	21.4	11.00	9.2	0	3	50	45	0	1	1
3	81189	F	37.0	11.9	6.10	9.5	0	0	31	67	0	2	0
3	81191	F	45.0	14.2	6.27	17.0	0	0	53	43	0	2	2
GROUP MEAN			48.5	14.9	7.14	16.4							
4	81246	F	43.0	13.4	6.09	18.7	0	0	42	58	0	0	0
4	81247	F	48.0	15.6	6.59	25.9	0	0	32	64	0	4	0
4	81248	F	45.0	15.0	6.74	8.9	0	0	44	52	0	4	0
4	81249	F	44.5	13.9	6.66	11.4	0	0	39	61	0	0	0
4	81250	F	45.0	13.9	6.51	11.1	0	0	26	72	0	2	0
GROUP MEAN			45.1	14.4	6.52	15.2							

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%
1	80981	M	91.0	19.0	38.0	26.0	0.64
1	80982	M	86.0	17.0	34.0	33.2	0.68
1	80983	M	110.0	23.0	19.0	28.8	0.58
1	80984	M	94.0	16.0	29.0	27.6	0.64
1	80985	M	113.0	16.0	31.0	17.2	0.51
GROUP MEAN			98.8	18.2	30.2	26.6	0.61
2	81101	M	83.0	19.0	34.0	30.0	0.47
2	81102	M	83.0	15.0	34.0	26.8	0.60
2	81103	M	90.0	19.0	34.0	16.0	0.54
2	81104	M	84.0	17.0	32.5	31.2	0.60
2	81105	M	104.0	18.0	37.5	37.6	0.43
GROUP MEAN			88.8	17.6	34.4	28.3	0.53
3	81161	M	107.0	20.0	31.0	16.8	0.45
3	81162	M	81.0	19.0	28.0	28.8	0.45
3	81163	M	90.0	16.0	34.0	23.6	0.49
3	81164	M	104.0	20.0	42.5	26.0	0.49
3	81165	M	104.0	19.0	36.0	40.0	0.42
GROUP MEAN			97.2	18.8	34.3	27.0	0.46
4	81221	M	86.0	16.0	28.0	19.6	0.62
4	81222	M	131.0	18.0	39.0	18.0	0.60
4	81223	M	98.0	18.0	41.0	20.0	0.41
4	81224	M	75.0	14.0	37.5	24.4	0.57
4	81225	M	89.0	16.0	31.0	14.0	0.56
GROUP MEAN			95.8	16.4	35.3	19.2	0.55

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%
1	81041	F	96.0	20.0	46.0	23.6	0.30
1	81042	F	70.0	19.0	36.0	25.2	0.49
1	81043	F	97.0	21.0	31.0	16.0	0.21
1	81044	F	87.0	23.0	37.5	19.2	0.28
1	81045	F	106.0	24.0	50.0	15.6	0.39
GROUP MEAN			91.2	21.4	40.1	19.9	0.33
2	81131	F	99.0	18.0	41.0	30.0	0.49
2	81132	F	106.0	20.0	37.5	17.2	0.64
2	81133	F	82.0	22.0	46.0	19.6	0.41
2	81134	F	108.0	20.0	41.0	22.4	0.59
2	81135	F	124.0	19.0	41.0	18.8	0.43
GROUP MEAN			103.8	19.8	41.3	21.6	0.51
3	81191	F	62.0	14.0	39.0	15.6	0.41
3	81192	F	76.0	16.0	31.0	16.8	0.49
3	81193	F	95.0	16.0	42.5	22.4	0.39
3	81194	F	74.0	14.0	34.0	38.8	0.56
3	81195	F	84.0	24.0	46.0	28.4	0.54
GROUP MEAN			78.2	16.8	38.5	24.4	0.48
4	81251	F	82.0	14.0	23.0	21.6	0.43
4	81252	F	113.0	14.0	41.0	19.2	0.49
4	81253	F	96.0	16.0	34.0	26.8	0.45
4	81254	F	118.0	19.0	34.0	12.8	0.43
4	81255	F	100.0	18.0	37.5	15.6	0.49
GROUP MEAN			101.8	16.2	33.9	19.2	0.46

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS
1	81031	M	150.0	14.0	28.0	22.6	0.31	95.0
1	81032	M	150.0	15.0	34.0	10.0	0.30	90.0
1	81033	M	159.0	16.5	34.0	41.0	0.39	86.0
1	81034	M	159.0	11.0	29.0	22.0	0.39	99.0
1	81035	M	155.0	15.0	39.0	31.5	0.39	107.0
GROUP MEAN			154.6	14.3	32.8	25.4	0.36	95.4
2	81121	M	165.0	12.0	31.0	17.0	0.42	50.0
2	81122	M	133.0	16.0	31.0	17.1	0.40	63.0
2	81123	M	175.0	13.5	26.0	22.0	0.40	186.0
2	81124	M	199.0	26.0	34.0	22.1	0.30	96.0
2	81125	M	179.0	23.0	34.0	27.5	0.36	104.0
GROUP MEAN			170.2	18.1	31.2	21.1	0.38	99.8
3	81181	M	152.0	13.0	*	*	0.51	214.0
3	81182	M	140.0	17.5	31.0	31.5	0.35	104.0
3	81183	M	157.0	14.0	34.0	21.9	0.30	95.0
3	81184	M	151.0	13.0	31.0	20.7	0.40	123.0
3	81185	M	170.0	15.0	31.0	15.0	0.40	119.0
GROUP MEAN			154.0	14.5	31.8	34.5	0.39	131.0
4	81241	M	150.0	12.0	31.0	17.0	0.40	199.0
4	81242	M	183.0	13.0	36.0	25.6	0.51	160.0
4	81243	M	180.0	12.0	29.0	17.5	0.31	81.0
4	81244	M	175.0	14.0	25.0	12.9	0.31	75.0
4	81245	M	170.0	14.0	34.0	18.5	0.31	130.0
GROUP MEAN			171.6	13.0	31.0	18.3	0.37	129.0

* TECHNICAL ERROR

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS
1	81091	F	154.0	14.5	34.0	33.5	0.40	113.0
1	81092	F	171.0	11.0	26.0	10.8	0.40	78.0
1	81093	F	149.0	13.0	34.0	14.5	0.49	140.0
1	81094	F	171.0	15.0	32.5	18.0	0.41	90.0
1	81095	F	175.0	13.5	29.0	11.0	0.40	77.0
GROUP MEAN			164.0	13.4	31.1	17.6	0.42	99.6
2	81151	F	170.0	12.0	26.0	8.1	0.41	89.0
2	81152	F	139.0	11.5	23.0	7.9	0.40	65.0
2	81153	F	162.0	10.0	46.0	9.8	0.40	165.0
2	81154	F	160.0	11.0	62.0	12.1	0.38	245.0
2	81155	F	151.0	7.5	29.0	11.1	0.49	83.0
GROUP MEAN			156.4	10.4	37.2	9.8	0.42	129.4
3	81211	F	156.0	10.0	23.0	13.2	0.40	90.0
3	81212	F	150.0	11.0	22.0	15.9	0.40	93.0
3	81213	F	161.0	11.0	23.0	17.8	0.40	74.0
3	81214	F	190.0	9.0	25.0	16.0	0.40	101.0
3	81215	F	176.0	10.0	25.0	10.8	0.49	68.0
GROUP MEAN			166.6	10.2	23.6	14.7	0.42	85.2
4	81271	F	160.0	10.0	20.0	12.1	0.38	76.0
4	81272	F	155.0	11.5	22.0	8.9	0.40	81.0
4	81273	F	170.0	12.0	25.0	14.2	0.42	88.0
4	81274	F	183.0	11.0	25.0	13.0	0.42	86.0
4	81275	F	155.0	12.0	20.0	13.1	0.41	103.0
GROUP MEAN			164.6	11.3	22.4	12.3	0.41	86.8

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS
1	81020	M	152.0	12.0	31.0	19.0	0.51	99.0
1	81021	M	166.0	16.5	31.0	8.2	0.39	102.0
1	81023	M	160.0	11.5	31.0	18.1	0.40	96.0
1	81024	M	200.0	15.0	29.0	17.5	0.29	77.0
1	81025	M	151.0	12.0	31.0	16.8	0.40	114.0
GROUP MEAN			165.8	13.4	30.6	15.9	0.40	97.6
2	81116	M	151.0	14.0	29.0	23.9	0.39	129.0
2	81117	M	164.0	13.0	69.0	32.0	0.40	250.+*
2	81118	M	192.0	19.0	32.0	14.6	0.40	90.0
2	81119	M	188.0	15.0	29.0	15.2	0.49	101.0
2	81120	M	201.0	11.0	29.0	20.0	0.50	79.0
GROUP MEAN			179.2	14.4	37.6	21.1	0.44	99.8
3	81176	M	170.0	10.0	32.0	12.9	0.49	73.0
3	81177	M	135.0	12.0	32.0	23.9	0.51	92.0
3	81178	M	141.0	11.5	29.0	15.8	0.50	100.0
3	81179	M	185.0	11.0	35.0	17.9	0.60	83.0
3	81180	M	151.0	11.0	36.0	12.5	0.40	110.0
GROUP MEAN			156.4	11.1	32.8	16.6	0.50	91.6
4	81235	M	136.0	10.0	29.0	13.2	0.40	105.0
4	81236	M	157.0	12.0	46.0	18.5	0.40	146.0
4	81237	M	140.0	10.0	29.0	15.1	0.50	93.0
4	81239	M	157.0	11.0	29.0	18.9	0.40	96.0
4	81240	M	171.0	10.0	50.0	14.0	0.49	103.0
GROUP MEAN			152.2	10.6	36.6	15.9	0.44	108.6

* = VALUE NOT INCLUDED IN MEAN

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS
1	81081	F	130.0	12.0	29.0	11.0	0.60	103.0
1	81082	F	144.0	15.0	28.0	9.2	0.61	85.0
1	81083	F	191.0	21.5	28.0	13.2	0.51	77.0
1	81084	F	143.0	13.0	31.0	7.2	0.50	98.0
1	81085	F	105.0	12.0	29.0	9.2	0.50	105.0
GROUP MEAN			142.6	14.7	29.0	10.0	0.54	93.6
2	81146	F	151.0	13.0	31.0	14.0	0.50	96.0
2	81147	F	145.0	16.0	29.0	7.0	0.51	85.0
2	81148	F	120.0	13.5	29.0	7.8	0.50	91.0
2	81149	F	137.0	10.0	31.0	12.5	0.41	92.0
2	81150	F	135.0	16.0	32.0	22.0	0.59	96.0
GROUP MEAN			137.6	13.7	30.4	12.7	0.50	92.0
3	81205	F	135.0	13.5	29.0	9.2	0.54	105.0
3	81206	F	145.0	10.0	28.0	8.0	0.70	102.0
3	81208	F	125.0	10.0	31.0	8.9	0.50	137.0
3	81209	F	126.0	10.0	31.0	14.5	0.45	107.0
3	81210	F	120.0	12.0	29.0	13.1	0.49	104.0
GROUP MEAN			130.2	11.1	29.6	10.7	0.54	111.0
4	81266	F	130.0	11.0	29.0	13.0	0.41	110.0
4	81267	F	141.0	12.0	31.0	9.1	0.41	133.0
4	81268	F	143.0	11.5	29.0	12.8	0.45	99.0
4	81269	F	146.0	11.0	29.0	11.1	0.50	96.0
4	81270	F	149.0	10.0	27.0	11.0	0.43	93.0
GROUP MEAN			141.8	11.1	29.0	11.4	0.44	106.2

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS
1	80985	M	106.0	13.0	23.0	9.4	0.40	138.0
1	80989	M	121.0	14.0	36.0	24.0	0.30	111.0
1	80990	M	126.0	50.0	38.0	25.8	0.41	192.0
1	80993	M	114.0	107.0	32.0	17.2	0.54	170.0
1	80997	M	122.0	14.0	29.0	13.7	0.30	112.0
GROUP MEAN			117.8	39.6	31.6	18.0	0.39	144.6
2	81099	M	117.0	10.0	49.0	14.7	0.30	177.0
2	81106	M	85.0	20.0	34.0	16.0	0.36	186.0
2	81108	M	115.0	11.0	29.0	11.2	0.31	178.0
2	81109	M	125.0	13.0	31.0	20.0	0.30	135.0
2	81111	M	120.0	23.0	36.0	10.8	0.35	132.0
GROUP MEAN			112.4	15.4	35.8	14.5	0.32	161.6
3	81156	M	139.0	10.0	36.0	19.9	0.30	136.0
3	81161	M	210.0	21.0	31.0	13.2	0.30	126.0
3	81163	M	101.0	17.5	28.0	10.2	0.40	111.0
3	81173	M	80.0	11.0	28.0	8.8	0.38	131.0
3	81174	M	105.0	15.0	28.0	28.0	0.23	134.0
GROUP MEAN			127.0	14.9	30.2	16.0	0.32	127.6
4	81222	M	115.0	15.0	34.0	12.2	0.31	117.0
4	81223	M	136.0	11.5	35.0	10.8	0.36	132.0
4	81224	M	58.0	17.0	28.0	12.1	0.39	225.0
4	81225	M	112.0	15.0	29.0	10.0	0.31	163.0
4	81226	M	216.0	14.5	39.0	23.3	0.39	155.0
GROUP MEAN			127.4	14.6	33.0	13.7	0.35	158.4

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS
1	81046	F	95.0	11.0	35.0	9.9	0.26	98.0
1	81047	F	120.0	17.0	36.0	17.2	0.30	128.0
1	81048	F	143.0	11.0	32.0	7.1	0.31	106.0
1	81051	F	151.0	11.0	32.0	7.2	0.39	110.0
1	81053	F	101.0	13.0	38.0	10.2	0.48	250.+*
GROUP MEAN			122.0	12.6	34.6	10.3	0.35	110.5
2	81138	F	131.0	11.0	38.0	14.8	0.31	159.0
2	81139	F	119.0	13.0	35.0	20.5	0.29	160.0
2	81141	F	142.0	27.0	28.0	8.1	0.25	99.0
2	81144	F	95.0	18.5	27.0	7.0	0.39	120.0
2	81145	F	165.0	11.0	31.0	13.0	0.32	87.0
GROUP MEAN			130.4	16.1	31.8	12.7	0.31	125.0
3	81196	F	105.0	17.0	28.0	22.1	0.40	118.0
3	81199	F	135.0	13.0	28.0	6.2	0.29	101.0
3	81201	F	131.0	15.0	34.0	11.9	0.30	116.0
3	81202	F	176.0	16.5	27.0	7.2	0.35	105.0
3	81203	F	115.0	9.0	31.0	7.2	0.48	121.0
GROUP MEAN			132.4	14.1	29.6	10.9	0.36	112.2
4	81251	F	151.0	15.0	29.0	9.2	0.32	98.0
4	81252	F	170.0	13.0	34.0	13.0	0.30	108.0
4	81253	F	127.0	10.0	31.0	11.6	0.29	105.0
4	81254	F	160.0	13.0	29.0	5.2	0.30	111.0
4	81255	F	135.0	13.0	28.0	15.8	0.30	112.0
GROUP MEAN			148.6	12.8	30.2	11.0	0.30	106.8

* = VALUE NOT INCLUDED IN MEAN

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	81031	M	146.0	3.70	104.0	10.0	31.2
1	81032	M	140.5	3.90	104.0	10.2	32.1
1	81033	M	144.0	3.60	104.0	10.0	31.4
1	81034	M	144.0	3.70	104.0	10.0	31.0
1	81035	M	145.0	3.70	104.0	10.2	32.1
GROUP MEAN			143.9	3.72	104.0	10.1	31.6
2	81121	M	145.0	3.80	105.0	10.4	30.1
2	81122	M	144.0	3.90	105.0	10.2	29.1
2	81123	M	144.0	4.40	104.0	10.4	30.0
2	81124	M	146.0	3.85	103.0	10.2	32.0
2	81125	M	145.0	3.65	104.0	10.2	31.9
GROUP MEAN			144.8	3.92	104.2	10.3	30.6
3	81181	M	146.0	4.20	104.0	10.4	33.1
3	81182	M	146.0	3.90	106.0	9.9	33.0
3	81183	M	146.0	3.55	106.0	10.0	33.0
3	81184	M	145.0	3.90	105.0	10.5	32.7
3	81185	M	144.0	4.00	105.5	10.5	32.9
GROUP MEAN			145.4	3.91	105.3	10.3	32.9
4	81241	M	145.0	4.50	103.0	10.2	35.2
4	81242	M	144.0	4.25	103.0	10.2	34.1
4	81243	M	145.5	3.80	104.0	9.9	34.1
4	81244	M	146.0	3.80	106.0	9.9	32.9
4	81245	M	145.0	3.75	103.0	10.2	34.0
GROUP MEAN			145.1	4.02	103.8	10.1	34.1

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	81091	F	147.5	3.15	104.0	10.0	31.2
1	81092	F	145.0	3.25	104.0	10.5	27.2
1	81093	F	145.5	3.80	100.0	10.6	32.8
1	81094	F	145.0	3.30	105.0	10.4	29.1
1	81095	F	143.5	3.30	104.0	10.7	29.1
GROUP MEAN			145.3	3.36	103.4	10.4	29.9
2	81151	F	145.0	3.80	107.0	10.2	27.0
2	81152	F	144.0	3.30	107.0	10.5	28.3
2	81153	F	145.0	3.10	102.0	10.7	31.2
2	81154	F	144.0	3.05	106.5	10.3	25.7
2	81155	F	144.0	3.30	102.0	10.8	29.9
GROUP MEAN			144.4	3.31	104.9	10.5	28.4
3	81211	F	147.0	3.30	106.5	10.4	29.5
3	81212	F	146.0	3.40	107.0	10.5	30.1
3	81213	F	145.0	3.10	105.5	10.8	27.0
3	81214	F	144.0	3.40	106.0	10.1	29.0
3	81215	F	145.0	3.30	103.5	10.8	27.9
GROUP MEAN			145.4	3.30	105.7	10.5	28.7
4	81271	F	146.0	3.60	103.5	10.5	31.2
4	81272	F	144.0	4.00	102.0	9.9	28.0
4	81273	F	147.0	3.30	105.0	10.8	28.1
4	81274	F	146.0	3.65	104.5	10.0	31.9
4	81275	F	147.0	4.10	105.0	10.6	31.9
GROUP MEAN			146.0	3.73	104.0	10.4	30.2

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	81020	M	146.0	3.60	105.0	9.9	28.7
1	81021	M	147.0	4.00	109.0	10.7	27.9
1	81023	M	144.0	3.60	108.0	10.1	22.2
1	81024	M	144.0	4.15	107.0	9.7	26.8
1	81025	M	145.0	3.50	107.0	10.3	26.9
GROUP MEAN			145.2	3.77	107.2	10.1	26.5
2	81116	M	147.0	3.80	107.0	10.4	26.5
2	81117	M	144.0	3.80	107.0	10.3	26.0
2	81118	M	144.0	3.70	106.0	10.7	23.2
2	81119	M	145.0	3.55	108.0	10.3	24.8
2	81120	M	144.0	3.40	109.0	10.1	24.0
GROUP MEAN			144.8	3.65	107.4	10.4	24.9
3	81176	M	143.0	3.50	105.5	10.1	25.2
3	81177	M	144.0	3.30	109.0	9.8	26.0
3	81178	M	144.0	3.60	108.5	10.0	25.9
3	81179	M	144.0	3.60	105.0	10.0	25.2
3	81180	M	144.0	3.70	107.0	10.1	28.0
GROUP MEAN			143.8	3.54	107.0	10.0	26.1
4	81235	M	144.0	3.60	107.0	10.1	27.2
4	81236	M	145.0	3.90	106.0	9.9	29.8
4	81237	M	145.0	3.50	105.0	10.3	31.0
4	81239	M	143.0	4.00	106.0	9.7	28.1
4	81240	M	143.0	3.90	105.0	10.2	28.1
GROUP MEAN			144.0	3.78	105.8	10.0	28.8

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	81081	F	142.0	3.40	105.0	10.3	26.0
1	81082	F	142.0	3.30	105.5	10.2	25.1
1	81083	F	141.0	3.50	101.0	10.7	26.2
1	81084	F	141.0	2.90	103.0	10.2	25.0
1	81085	F	143.0	3.00	110.0	9.4	24.1
GROUP MEAN			141.8	3.22	104.9	10.2	25.3
2	81146	F	142.0	3.10	107.0	10.1	25.2
2	81147	F	142.0	3.00	103.0	10.4	27.5
2	81148	F	142.0	3.00	106.0	10.3	25.2
2	81149	F	142.0	2.90	106.0	10.3	24.7
2	81150	F	142.0	3.00	102.0	10.3	26.1
GROUP MEAN			142.0	3.00	104.8	10.3	25.7
3	81205	F	143.0	3.05	107.0	10.1	26.5
3	81206	F	145.0	3.25	104.0	10.6	25.8
3	81208	F	143.0	3.60	103.0	10.5	25.5
3	81209	F	144.0	2.80	103.0	10.5	26.0
3	81210	F	145.0	2.80	103.0	10.3	26.3
GROUP MEAN			144.0	3.10	104.0	10.4	26.0
4	81266	F	146.0	3.30	103.5	10.2	28.5
4	81267	F	143.0	3.60	104.5	10.3	26.9
4	81268	F	145.0	2.90	105.0	10.3	26.0
4	81269	F	144.0	3.65	102.0	10.6	28.6
4	81270	F	144.0	3.30	104.0	10.0	28.2
GROUP MEAN			144.4	3.35	103.8	10.3	27.6

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	80985	M	143.0	4.00	105.0	9.8	25.6
1	80989	M	145.0	5.00	100.0	10.5	32.0
1	80990	M	143.0	4.60	96.0	11.1	32.1
1	80993	M	143.0	4.90	93.0	13.9	27.6
1	80997	M	143.0	3.60	105.0	9.5	26.2
GROUP MEAN			143.4	4.42	99.8	11.0	28.7
2	81099	M	143.0	5.50	95.0	9.9	33.6
2	81106	M	147.0	3.20	97.0	9.9	34.1
2	81108	M	140.0	3.95	103.0	9.4	26.9
2	81109	M	142.0	3.30	100.0	9.4	28.2
2	81111	M	142.0	3.80	105.0	10.6	24.0
GROUP MEAN			142.8	3.95	100.0	9.8	29.4
3	81156	M	141.0	3.70	104.0	9.8	24.6
3	81161	M	143.0	4.00	100.0	10.7	30.5
3	81163	M	144.0	3.70	110.0	10.0	20.6
3	81173	M	143.0	4.00	107.0	10.2	23.1
3	81174	M	145.0	3.20	104.0	9.3	29.0
GROUP MEAN			143.2	3.72	105.0	10.0	25.6
4	81222	M	144.0	4.15	102.0	10.1	29.2
4	81223	M	142.0	3.65	105.0	9.9	23.9
4	81224	M	143.0	4.50	104.0	10.4	23.0
4	81225	M	144.0	4.30	107.0	10.0	23.8
4	81226	M	145.0	9.70	102.0	10.3	24.3
GROUP MEAN			143.6	5.26	104.0	10.1	24.8

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	81046	F	144.0	3.30	109.0	9.9	23.0
1	81047	F	142.0	3.00	97.0	9.4	32.2
1	81048	F	142.0	3.15	103.0	9.6	29.0
1	81051	F	141.0	3.50	102.0	9.9	25.5
1	81053	F	143.0	3.50	100.0	10.0	30.5
GROUP MEAN			142.4	3.29	102.2	9.8	28.0
2	81138	F	142.0	3.20	102.0	10.1	26.8
2	81139	F	142.0	3.10	103.0	10.2	25.6
2	81141	F	142.0	3.40	107.0	9.6	26.0
2	81144	F	143.0	3.00	105.0	10.1	26.2
2	81145	F	142.0	3.40	105.0	10.0	23.9
GROUP MEAN			142.2	3.22	104.4	10.0	25.7
3	81196	F	142.0	3.10	96.0	10.6	27.8
3	81199	F	143.0	3.90	105.0	10.1	24.2
3	81201	F	142.0	3.50	105.0	9.8	22.2
3	81202	F	141.0	3.90	100.0	10.1	25.2
3	81203	F	142.0	3.30	96.0	10.2	30.2
GROUP MEAN			142.0	3.54	100.4	10.2	25.9
4	81251	F	143.0	3.70	100.5	10.2	27.8
4	81252	F	144.0	5.00	101.0	10.2	27.2
4	81253	F	145.0	3.60	104.0	9.4	25.1
4	81254	F	144.0	4.20	105.0	9.6	26.5
4	81255	F	143.0	7.40	101.0	10.0	29.0
GROUP MEAN			143.8	4.78	102.3	9.9	27.1

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %
1	80981	M	6.20	55.0	17.5	10.5	17.8	2.0
1	80982	M	6.30	50.0	22.5	10.5	20.0	4.3
1	80983	M	6.50	50.5	20.5	10.6	21.0	2.0
1	80984	M	6.20	47.5	19.6	9.5	21.0	2.6
1	80985	M	6.30	55.0	18.8	10.1	17.6	1.0
GROUP MEAN			6.30	51.6	19.8	10.2	19.5	2.4
2	81101	M	6.30	52.0	19.4	9.9	20.0	2.0
2	81102	M	6.10	51.5	16.0	9.3	22.0	1.8
2	81103	M	6.50	45.5	22.0	11.3	22.0	1.4
2	81104	M	6.50	50.5	21.0	10.2	20.5	1.7
2	81105	M	6.20	50.0	19.4	10.4	18.0	2.7
GROUP MEAN			6.32	49.9	19.6	10.2	20.5	1.9
3	81161	M	6.50	48.5	21.5	10.0	22.0	1.0
3	81162	M	6.20	49.0	20.5	7.9	22.5	2.6
3	81163	M	6.00	54.0	18.1	8.3	18.9	0.6
3	81164	M	6.80	48.5	22.5	9.6	17.9	1.2
3	81165	M	6.60	53.0	19.1	9.6	18.9	1.1
GROUP MEAN			6.42	50.6	20.3	9.1	20.0	1.3
4	81221	M	6.30	50.5	21.0	8.5	17.7	2.1
4	81222	M	6.40	50.5	18.8	11.3	22.5	0.3
4	81223	M	6.20	49.0	20.5	11.8	17.6	1.8
4	81224	M	6.60	50.0	23.5	9.4	16.7	1.4
4	81225	M	6.50	51.5	22.5	8.4	17.3	0.8
GROUP MEAN			6.40	50.3	21.3	9.9	18.4	1.3

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %
1	81041	F	7.30	44.0	12.6	25.2	18.3	1.6
1	81042	F	6.20	QNS	QNS	QNS	QNS	QNS
1	81043	F	6.60	56.5	16.8	8.1	17.7	1.4
1	81044	F	6.50	47.5	18.3	12.6	19.7	1.9
1	81045	F	9.70	51.0	11.2	19.4	16.5	0.7
GROUP MEAN			7.26	49.8	14.7	16.3	18.1	1.4
2	81131	F	8.20	52.5	18.4	9.0	19.0	0.2
2	81132	F	6.40	52.0	17.9	8.4	19.2	1.6
2	81133	F	6.90	47.5	17.1	14.0	18.1	2.7
2	81134	F	7.50	43.0	11.1	25.0	18.6	3.1
2	81135	F	6.90	48.5	16.0	12.5	19.3	2.4
GROUP MEAN			7.18	48.7	16.1	13.8	18.8	2.0
3	81191	F	7.30	50.0	13.8	15.0	18.4	2.6
3	81192	F	6.00	53.0	21.5	5.5	17.8	1.6
3	81193	F	5.90	52.5	15.3	11.0	21.0	1.7
3	81194	F	6.00	14.8	28.0	23.0	30.0	1.5
3	81195	F	7.20	44.0	13.0	21.5	18.4	2.0
GROUP MEAN			6.48	42.9	18.3	15.2	21.1	1.9
4	81251	F	7.30	45.0	16.4	16.7	17.5	1.5
4	81252	F	6.20	51.5	13.7	12.6	22.0	1.9
4	81253	F	5.80	13.0	24.0	18.0	40.0	3.3
4	81254	F	5.50	55.0	14.3	9.0	21.0	3.2
4	81255	F	6.10	47.5	14.0	14.5	19.1	4.0
GROUP MEAN			6.18	42.4	16.5	14.2	23.9	2.8

QNS = Quantity not sufficient

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	81031	M	6.75	56.0	17.4	9.8	19.0	1.5	3.00
1	81032	M	6.51	48.5	21.5	8.6	20.0	3.8	2.80
1	81033	M	6.25	49.0	20.5	10.3	20.5	3.0	2.85
1	81034	M	6.30	55.5	22.0	6.6	16.4	1.4	3.20
1	81035	M	6.40	50.0	21.5	9.8	19.8	2.0	2.90
GROUP MEAN			6.44	51.8	20.6	9.0	19.1	2.3	2.95
2	81121	M	6.50	56.0	17.4	10.4	18.6	1.2	4.10
2	81122	M	6.40	47.5	20.0	10.8	21.0	2.3	3.00
2	81123	M	6.50	48.0	22.5	8.9	21.0	2.5	2.65
2	81124	M	6.55	48.0	18.5	10.0	23.5	4.7	2.40
2	81125	M	6.55	49.0	22.5	7.3	19.5	4.1	2.50
GROUP MEAN			6.50	49.7	20.2	9.5	20.7	3.0	2.93
3	81181	M	6.30	46.5	21.5	11.5	20.5	3.0	2.25
3	81182	M	5.95	51.0	22.0	8.6	18.6	2.5	2.25
3	81183	M	5.69	54.5	15.6	11.5	20.0	1.7	2.41
3	81184	M	6.19	45.5	23.5	10.4	20.5	3.8	2.48
3	81185	M	6.21	47.0	19.5	10.9	21.0	2.2	3.10
GROUP MEAN			6.07	48.9	20.4	10.6	20.1	2.6	2.50
4	81241	M	5.90	47.0	24.0	9.6	19.4	2.4	2.49
4	81242	M	6.00	46.0	24.0	9.5	20.0	2.7	2.31
4	81243	M	5.79	51.0	23.0	5.9	19.5	1.7	2.31
4	81244	M	5.75	52.0	17.1	9.8	19.8	1.8	2.92
4	81245	M	6.39	46.0	21.5	8.6	23.0	3.2	2.41
GROUP MEAN			5.97	48.4	21.9	8.7	20.3	2.4	2.49

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	81091	F	6.10	53.5	15.8	9.9	18.0	4.2	2.60
1	81092	F	7.10	51.0	21.0	8.8	17.7	3.7	4.35
1	81093	F	7.01	55.5	17.1	9.6	16.8	2.0	3.49
1	81094	F	6.69	51.5	18.8	9.4	19.0	1.8	4.10
1	81095	F	6.87	55.0	15.3	8.5	18.5	2.7	3.10
GROUP MEAN			6.75	53.3	17.6	9.2	18.0	2.9	3.53
2	81151	F	6.41	51.5	19.0	8.7	18.6	2.9	3.40
2	81152	F	6.40	51.5	16.3	10.9	20.0	4.1	2.94
2	81153	F	6.99	51.0	19.6	9.6	20.0	2.8	3.01
2	81154	F	6.90	54.0	15.1	10.3	20.0	4.5	3.90
2	81155	F	7.20	58.0	18.7	6.9	15.7	2.1	3.31
GROUP MEAN			6.78	53.2	17.7	9.3	18.9	3.3	3.31
3	81211	F	6.80	61.0	17.0	8.1	15.4	1.3	2.90
3	81212	F	6.10	61.5	14.5	5.7	18.8	1.9	2.60
3	81213	F	6.55	59.0	15.8	8.7	16.8	2.1	3.08
3	81214	F	6.30	52.0	18.0	8.3	19.8	4.8	2.59
3	81215	F	6.90	55.0	20.0	7.2	17.2	2.7	3.15
GROUP MEAN			6.53	57.7	17.1	7.6	17.6	2.6	2.86
4	81271	F	6.41	55.0	17.4	8.0	18.2	5.3	2.69
4	81272	F	5.50	51.0	14.7	9.5	21.0	5.9	3.00
4	81273	F	6.65	57.0	19.0	7.9	15.3	3.0	2.85
4	81274	F	6.11	55.0	16.2	9.2	18.7	3.7	2.61
4	81275	F	6.20	54.5	19.0	7.8	17.4	3.3	2.85
GROUP MEAN			6.17	54.5	17.3	8.5	18.1	4.2	2.80

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	81020	M	6.49	54.0	17.1	7.1	20.5	2.8	1.99
1	81021	M	6.20	47.5	22.5	8.8	21.0	2.1	1.89
1	81023	M	6.45	60.0	11.9	7.8	19.4	3.0	2.40
1	81024	M	5.65	58.0	15.4	8.0	17.6	2.2	2.25
1	81025	M	6.41	63.5	7.5	7.0	19.6	4.0	2.19
GROUP MEAN			6.24	56.6	14.9	7.7	19.6	2.8	2.14
2	81116	M	6.50	58.0	11.2	8.4	18.1	3.8	2.69
2	81117	M	6.50	50.0	11.8	12.1	24.0	5.1	2.21
2	81118	M	6.40	60.5	13.9	6.7	17.0	3.2	1.80
2	81119	M	6.40	60.0	11.9	6.4	17.8	3.1	2.38
2	81120	M	6.31	58.0	12.0	6.5	19.8	4.7	2.49
GROUP MEAN			6.42	57.3	12.2	8.0	19.3	4.0	2.31
3	81176	M	6.70	58.0	13.8	7.5	18.3	3.6	1.91
3	81177	M	6.50	58.5	14.3	6.7	20.0	4.3	2.59
3	81178	M	6.30	59.0	9.8	8.2	19.0	6.4	2.20
3	81179	M	6.10	58.5	9.9	8.7	18.8	4.0	2.09
3	81180	M	6.05	61.0	10.5	7.2	20.0	3.5	2.70
GROUP MEAN			6.33	59.0	11.7	7.7	19.2	4.4	2.30
4	81235	M	6.50	55.5	13.2	8.3	21.0	4.0	2.20
4	81236	M	5.90	57.0	14.6	7.9	18.1	5.5	2.99
4	81237	M	6.50	57.0	15.3	10.2	14.3	5.3	2.01
4	81239	M	5.91	38.0	15.0	11.4	28.5	7.5	2.19
4	81240	M	5.90	38.0	22.0	14.2	23.0	3.0	2.12
GROUP MEAN			6.14	49.1	16.0	10.4	21.0	5.1	2.30

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	81081	F	7.09	47.0	20.0	11.6	20.0	4.0	3.80
1	81082	F	6.35	48.0	21.0	12.9	20.0	2.0	3.20
1	81083	F	6.51	43.5	19.8	10.3	23.5	3.8	4.42
1	81084	F	6.71	49.5	23.5	8.5	19.6	2.0	3.20
1	81085	F	6.09	48.0	15.3	10.2	25.0	3.8	2.30
GROUP MEAN			6.55	47.2	19.9	10.7	21.6	3.1	3.38
2	81146	F	6.30	32.0	33.5	11.3	21.0	3.6	3.40
2	81147	F	6.90	45.5	16.0	11.8	24.0	4.6	3.71
2	81148	F	7.09	47.0	16.6	8.0	23.0	6.7	5.30
2	81149	F	6.80	36.5	20.0	13.1	28.5	3.8	3.80
2	81150	F	7.09	39.5	16.2	12.4	26.0	6.4	4.12
GROUP MEAN			6.84	40.1	20.5	11.3	24.5	5.0	4.07
3	81205	F	6.25	54.5	14.4	9.5	20.0	1.6	3.05
3	81206	F	6.65	45.0	22.0	9.0	22.0	3.1	4.30
3	81208	F	6.60	49.0	18.0	9.4	23.5	3.2	3.70
3	81209	F	6.50	45.0	22.0	9.7	21.0	5.6	3.29
3	81210	F	6.80	52.0	16.1	10.4	21.0	3.4	3.40
GROUP MEAN			6.56	49.1	18.5	9.6	21.5	3.4	3.55
4	81266	F	6.21	43.5	21.0	9.3	25.0	4.1	2.80
4	81267	F	7.01	58.5	11.8	7.6	19.8	5.3	4.16
4	81268	F	6.59	57.0	12.6	8.7	19.4	6.2	3.50
4	81269	F	7.15	62.0	8.8	7.1	19.6	3.1	3.40
4	81270	F	6.20	55.0	13.7	10.1	19.3	4.4	2.89
GROUP MEAN			6.63	55.2	13.6	8.6	20.6	4.6	3.35

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	80985	M	6.60	31.5	19.5	10.0	30.0	9.0	2.00
1	80989	M	7.10	24.0	18.0	10.0	49.5	8.5	1.50
1	80990	M	6.65	24.0	23.0	11.0	31.0	11.0	1.40
1	80993	M	6.61	23.5	30.5	13.5	29.5	3.0	1.50
1	80997	M	6.66	27.5	20.5	11.0	33.0	8.0	1.50
GROUP MEAN			6.72	26.1	22.3	11.1	34.6	7.9	1.58
2	81099	M	6.79	22.0	18.0	9.0	36.0	15.0	1.19
2	81106	M	6.70	23.0	19.0	11.0	31.0	16.0	1.61
2	81108	M	6.70	39.0	14.0	9.5	27.5	10.0	2.20
2	81109	M	6.20	22.0	20.0	13.5	36.5	8.0	1.38
2	81111	M	6.60	33.0	28.0	13.0	24.0	2.0	1.89
GROUP MEAN			6.60	27.8	19.8	11.2	31.0	10.2	1.65
3	81156	M	6.41	40.0	17.0	10.0	27.0	6.0	2.90
3	81161	M	6.40	16.0	34.0	13.0	40.0	7.0	1.10
3	81163	M	6.50	31.0	26.0	10.5	27.5	5.0	2.51
3	81173	M	6.80	32.0	19.0	12.0	31.5	5.5	2.39
3	81174	M	5.91	17.0	21.0	12.5	36.5	13.0	0.98
GROUP MEAN			6.40	27.2	23.4	11.6	32.5	7.3	1.98
4	81222	M	6.70	28.0	22.0	12.0	31.0	7.0	1.99
4	81223	M	6.75	38.0	17.0	9.0	30.0	6.0	2.59
4	81224	M	6.49	25.0	34.0	14.0	17.0	10.0	1.50
4	81225	M	5.91	25.0	20.0	13.0	34.0	8.0	2.91
4	81226	M	6.60	32.0	16.0	12.0	31.0	9.0	2.10
GROUP MEAN			6.49	29.6	21.8	12.0	28.6	8.0	2.22

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	81046	F	6.50	42.0	13.0	11.0	24.0	10.0	3.09
1	81047	F	7.10	33.0	12.5	8.5	30.0	16.0	2.19
1	81048	F	6.80	44.0	16.0	8.0	23.5	8.5	3.99
1	81051	F	6.91						2.56
1	81053	F	6.21	43.5	15.5	9.0	21.0	11.0	2.95
GROUP MEAN			6.70	40.6	14.3	9.1	24.6	11.4	2.96
2	81138	F	6.35	46.0	19.0	9.0	20.0	6.0	3.68
2	81139	F	6.99	24.0	20.0	10.0	36.0	10.0	2.00
2	81141	F	5.90	38.0	20.5	10.5	25.0	6.0	2.60
2	81144	F	6.51	33.5	13.5	11.5	26.5	10.0	2.52
2	81145	F	7.10	34.0	26.0	12.0	24.0	4.0	2.76
GROUP MEAN			6.57	35.1	20.8	10.6	26.3	7.2	2.71
3	81196	F	7.31	25.0	27.5	9.5	30.0	8.0	2.01
3	81199	F	6.70	48.0	9.5	9.5	24.5	8.5	3.10
3	81201	F	6.91	42.0	13.5	8.5	26.0	10.0	2.79
3	81202	F	6.81	43.0	16.0	10.0	22.0	9.0	3.00
3	81203	F	7.00	35.5	22.5	11.0	23.0	8.0	2.71
GROUP MEAN			6.95	38.7	17.8	9.7	25.1	8.7	2.72
4	81251	F	7.10	43.0	18.0	10.0	23.0	6.0	3.19
4	81252	F	6.70	42.0	15.0	11.0	23.0	9.0	2.98
4	81253	F	6.89	40.5	23.5	10.0	19.0	7.0	2.90
4	81254	F	6.40	46.0	14.0	10.0	24.0	6.0	3.84
4	81255	F	6.22	41.0	11.5	11.0	25.5	11.0	3.00
GROUP MEAN			6.66	42.5	16.4	10.4	22.9	7.8	3.18

TABLE NO. 4 - URINE ANALYSIS
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	NUMBER OF ANIMALS	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	5*	M	7	1.030	0	0	0	0	0-1		1-3	MUCH	MANY	MANY	MANY
2	5*	M	7	1.020	0	0	0	0		1-3	2-4	MUCH	MANY	MANY	MANY
3	5*	M	7	1.017	0	0	0	0			1-3	MUCH	MANY	MANY	MANY
4	5*	M	7	1.015	0	0	0	0	0-1	2-4	2-4	MUCH	MANY	MANY	

* = POOLED SAMPLES

TABLE NO. 4 - URINE ANALYSIS
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	NUMBER OF ANIMALS	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	5*	F	7	1.016	0	0	0	0		1-3	2-4	MUCH	MANY	MANY	
2	5*	F	7	1.017	0	0	0	0		2-4		MUCH	MANY	MANY	
3	5*	F	7	1.013	0	0	0	0		0-1	1-3	MUCH	MANY	MANY	
4	5*	F	7	1.014	0	0	0	0		1-3		MUCH	FEW	MANY	

* = POOLED SAMPLES

TABLE NO. 4 - URINE ANALYSIS
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	NUMBER OF ANIMALS	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	5*	M	7	1.025	0	0	1	0		1-3		MUCH	MANY	MANY	FEW
2	5*	M	6	1.026	0	0	T	0	1-3				MANY	MANY	FEW
3	5*	M	6	1.023	0	0	1	0		8-10		LITTLE	MANY	MANY	MANY
4	5*	M	6	1.024	0	0	1	0	0-1	2-4	1-3	MUCH	MANY	MANY	

* = POOLED SAMPLES

TABLE NO. 4 - URINE ANALYSIS
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	NUMBER OF ANIMALS	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
									--------MICROSCOPIC FINDINGS----------						
1	5*	F	6	1.014	0	0	T	0		1-3	2-4	MUCH	MANY	MANY	
2	5*	F	6	1.018	0	0	0	0		2-4	1-3	LITTLE	MANY	MANY	
3	5*	F	6	1.020	0	0	T	0		2-4	1-3	MUCH	MANY	MANY	
4	5*	F	6	1.011	0	0	0	0		4-6		MUCH	MANY	MANY	

* = POOLED SAMPLES

TABLE NO. 4 - URINE ANALYSIS
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	NUMBER OF ANIMALS	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	5*	M	6	1.035	0	0	4	0	TNTC					FEW	FEW
2	5*	M	7	1.031	0	0	4	0	0-2	0-2			FEW	MANY	FEW
3	5*	M	7	1.015	0	0	3	0		0-2			MANY	MANY	FEW
4	5*	M	8	1.020	0	0	2	0			0-1	MUCH	MANY	MANY	FEW

* = POOLED SAMPLES

TABLE NO. 4 - URINE ANALYSIS
ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS
WEEK 52

GROUP NUMBER	NUMBER OF ANIMALS	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	5*	F	7	1.012	0	0	0	0					FEW	MANY	
2	5*	F	7	1.011	0	0	0	0		0-1	3-4		FEW	MANY	
3	5*	F	7	1.014	0	0	T	0		1-2	0-1		FEW	MANY	
4	5*	F	7	1.006	0	0	0	0		0-1	0-1			MANY	

* = POOLED SAMPLES

TABLE NO. 4 - URINE ANALYSIS
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	PROTEIN	BILIRUBIN	OCC BLD	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	4*	M	6	1.019	0	2	0	1	25-40	0-2				MANY	
4	5*	M	6	1.022	0	2	0	T	40-50	0-4	0-1			MANY	FEW

* = POOLED SAMPLES

TABLE NO. 4 - URINE ANALYSIS
ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	5*	F	6	1.014	0		1	0	0-1	0-1				MANY	
4	5*	F	6	1.019	0	T	0			0-5	0-1			MANY	

* = POOLED SAMPLES

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 26 WEEKS

			BODY WEIGHT		THYROID				HEART			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	10	545	45	0.028	0.003	0.0053	0.0008	1.89	0.28	0.349	0.061
2	M	5	566	87	0.028	0.001	0.0051	0.0010	1.78	0.10	0.319	0.041
3	M	5	524	29	0.028	0.004	0.0053	0.0009	1.60	0.20	0.307	0.040
4	M	5	459	57	0.022 S-	0.003	0.0048	0.0006	1.53	0.16	0.335	0.043
1	F	10	305	33	0.025	0.004	0.0082	0.0012	1.14	0.12	0.376	0.043
2	F	5	314	36	0.024	0.006	0.0077	0.0016	1.05	0.05	0.337	0.031
3	F	5	292	39	0.021	0.002	0.0072	0.0005	1.01	0.11	0.352	0.055
4	F	5	247 S-	21	0.020	0.002	0.0080	0.0004	0.92 S-	0.10	0.37	0.03

S- = significantly lower than the control

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 26 WEEKS

			BODY WEIGHT		LIVER				SPLEEN			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	10	545	45	14.71	1.43	2.71	0.31	0.72	0.10	0.13	0.02
2	M	5	566	87	14.89	1.98	2.65	0.28	0.78	0.10	0.14	0.03
3	M	5	524	29	14.29	2.17	2.73	0.37	0.76	0.06	0.15	0.01
4	M	5	459	57	12.51	1.58	2.72	0.08	0.67	0.07	0.15	0.02
1	F	10	305	33	8.07	1.32	2.64	0.33	0.48	0.08	0.16	0.03
2	F	5	314	36	8.53	1.47	2.72	0.32	0.52	0.09	0.17	0.03
3	F	5	292	39	7.60	1.11	2.60	0.21	0.50	0.12	0.17	0.05
4	F	5	247S-	21	6.40	0.61	2.59	0.11	0.49	0.11	0.20	0.05

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 26 WEEKS

			BODY WEIGHT		KIDNEYS				ADRENALS			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	10	545	45	3.79	0.34	0.697	0.045	0.054	0.006	0.0099	0.001
2	M	5	566	87	3.49	0.51	0.623	0.082	0.060	0.009	0.011	0.002
3	M	5	524	29	3.58	0.20	0.684	0.023	0.055	0.009	0.010	0.001
4	M	5	459	57	3.42	0.55	0.744	0.077	0.055	0.011	0.012	0.002
1	F	10	305	33	2.08	0.27	0.684	0.075	0.076	0.012	0.025	0.004
2	F	5	314	36	2.15	0.35	0.688	0.100	0.077	0.014	0.025	0.004
3	F	5	292	39	1.95	0.13	0.673	0.062	0.077	0.014	0.027	0.006
4	F	5	247 S-	21	1.85	0.22	0.749	0.043	0.073	0.014	0.029	0.005

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 26 WEEKS

			BODY WEIGHT		TESTES							
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	10	545	45	4.98	1.14	0.918	0.207				
2	M	5	566	87	5.47	0.30	0.986	0.165				
3	M	5	524	29	5.33	0.49	1.02	0.12				
4	M	5	459	57	5.00	0.23	1.10	0.11				

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS

			BODY WEIGHT		THYROID				HEART			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	10	613	88	0.033	0.006	0.0054	0.0007	1.71	0.24	0.279	0.017
2	M	5	614	45	0.031	0.008	0.0049	0.0009	1.72	0.30	0.282	0.055
3	M	5	612	104	0.033	0.002	0.0056	0.0011	1.84	0.35	0.304	0.052
4	M	5	486	49	0.028	0.004	0.0057	0.0009	1.44	0.26	0.296	0.035
1	F	10	347	46	0.031	0.008	0.0092	0.0027	1.14	0.19	0.332	0.056
2	F	5	364	44	0.031	0.006	0.0084	0.0011	1.11	0.14	0.306	0.035
3	F	5	340	63	0.026	0.008	0.0077	0.0015	1.18	0.09	0.354	0.041
4	F	5	286 S-	12	0.022	0.004	0.0077	0.0014	1.02	0.12	0.357	0.037

S- = SIGNIFICANTLY LOWER THAN THE CONTROL

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS

			BODY WEIGHT		LIVER				SPLEEN			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	10	613	88	15.15	2.10	2.47	0.14	0.80	0.12	0.13	0.03
2	M	5	614	45	15.74	2.41	2.56	0.23	0.90	0.12	0.15	0.02
3	M	5	612	104	14.69	2.30	2.41	0.22	0.72	0.15	0.12	0.03
4	M	5	486	49	11.56 S-	1.66	2.37	0.13	0.72	0.12	0.15	0.02
1	F	10	347	46	9.04	1.47	2.62	0.39	0.54	0.09	0.16	0.02
2	F	5	364	44	8.82	0.87	2.44	0.21	0.54	0.08	0.15	0.02
3	F	5	340	63	8.29	1.15	2.46	0.28	0.53	0.12	0.16	0.04
4	F	5	286 S-	12	7.57	0.60	2.65	0.20	0.53	0.06	0.18	0.02

S- = SIGNIFICANTLY LOWER THAN THE CONTROL

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS

			BODY WEIGHT		KIDNEYS				ADRENALS			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	10	613	88	3.64	0.46	0.597	0.054	0.060	0.005	0.0099	0.0012
2	M	5	614	45	3.75	0.58	0.608	0.054	0.062	0.006	0.010	0.001
3	M	5	612	104	3.78	0.35	0.632	0.120	0.058	0.006	0.0097	0.0017
4	M	5	486	49	3.33	0.66	0.683	0.105	0.053	0.005	0.011	0.000
1	F	10	347	46	2.12	0.28	0.619	0.108	0.087	0.014	0.025	0.005
2	F	5	364	44	2.31	0.26	0.642	0.108	0.084	0.008	0.023	0.003
3	F	5	340	63	2.26	0.17	0.678	0.105	0.086	0.009	0.026	0.006
4	F	5	286 S-	12	2.20	0.25	0.769	0.083	0.074	0.007	0.026	0.003

S- = SIGNIFICANTLY LOWER THAN THE CONTROL

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 52 WEEKS

			BODY WEIGHT		TESTES							
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	10	613	88	5.06	0.85	0.832	0.134				
2	M	5	614	45	5.32	0.56	0.871	0.109				
3	M	5	612	104	5.63	0.21	0.942	0.175				
4	M	5	486	49	5.19	0.41	1.07 S+	0.07				

S+ = SIGNIFICANTLY HIGHER THAN THE CONTROL

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS

			BODY WEIGHT		THYROID				HEART			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	13	473	102	0.069	0.100	0.015	0.019	1.84	0.25	0.403	0.088
2	M	6	519	120	0.042	0.006	0.0083	0.0020	1.96	0.29	0.401	0.135
3	M	5	577	60	0.042	0.005	0.0073	0.0006	2.15	0.25	0.374	0.050
4	M	16	484	87	0.039	0.006 15/	0.0082	0.0013 15/	2.00	0.25	0.422	0.068
1	F	19	365	61	0.040	0.008	0.011	0.003	1.40	0.28	0.386	0.071
2	F	8	367	42	0.040	0.008	0.011	0.002	1.23	0.49	0.341	0.139
3	F	9	340	51	0.037	0.006	0.011	0.002	1.33	0.26	0.405	0.149
4	F	15	328	70	0.031 S-	0.005	0.010	0.002	1.40	0.25	0.436	0.089

__/ = MEAN FOR NUMBER DESIGNATED

S- = SIGNIFICANTLY LOWER THAN CONTROL

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS

			BODY WEIGHT		LIVER				SPLEEN			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	13	473	102	12.30	2.07	2.69	0.59	0.69	0.23	0.15	0.05
2	M	6	519	120	12.11	2.12	2.41	0.52	0.92	0.23	0.18	0.04
3	M	5	577	60	14.28	1.63	2.48	0.28	1.08 S+	0.18	0.189	0.037
4	M	16	484	87	13.32	1.78	2.79	0.35	0.96	0.53	0.20	0.09
1	F	19	365	61	9.91	1.91	2.74	0.47	0.60	0.13	0.17	0.05
2	F	8	367	42	10.22	2.35	2.78	0.54	0.69	0.24	0.19	0.06
3	F	9	340	51	9.71	1.64	2.91	0.71	0.61	0.18	0.18	0.05
4	F	15	328	70	8.86	1.39	2.79	0.61	0.59	0.22	0.19	0.08

S+ = SIGNIFICANTLY HIGHER THAN CONTROL

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS

			BODY WEIGHT		KIDNEYS				ADRENALS			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %	WEIGHT G.	S G.	RATIO %	S %
1	M	13	473	102	4.32	1.58	0.959	0.418	0.147	0.190	0.0294	0.0310
2	M	6	519	120	3.83	0.80	0.770	0.217	0.230	0.332	0.0416	0.0491
3	M	5	577	60	3.92	0.39	0.683 S-	0.069	0.074	0.012	0.013	0.003
4	M	16	484	87	4.31	0.48	0.904	0.105	0.069	0.014	0.015	0.003
1	F	19	365	61	2.61	0.41	0.737	0.094	0.130	0.128	0.0368	0.0365
2	F	8	367	42	2.87	0.45	0.790	0.142	0.145	0.061	0.0394	0.0163
3	F	9	340	51	2.40	0.51	0.711	0.144	0.100	0.037	0.0296	0.0107
4	F	15	328	70	2.52	0.28	0.792	0.145	0.087	0.020	0.028	0.011

S- = SIGNIFICANTLY LOWER THAN CONTROL

TABLE NO. 5- MEAN TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, ORGAN/BODY WEIGHT RATIOS, AND STANDARD DEVIATIONS FOR MALE AND FEMALE ALBINO RATS.

ALBINO RATS RECEIVING X-5120 FOR 104 WEEKS

			BODY WEIGHT		TESTES			
GROUP NUMBER	SEX	N	WEIGHT G.	S G.	WEIGHT G.	S G.	RATIO %	S %
1	M	13	473	102	4.71	1.25	1.01	0.20
2	M	6	519	120	4.70	0.59	0.949	0.269
3	M	5	577	60	5.50	0.92	0.959	0.192
4	M	16	484	87	4.67	1.17	0.984	0.254

KEY TO DETAILED HISTOPATHOLOGY INCIDENCE TABLE

N = No Section

X = Not Remarkable

A = Autolysis

P or √ = Present or Taken

0 = Absent

1 = Minimal

2 = Slight

3 = Moderate

4 = Moderate to Severe

5 = Severe

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	MALES GROUP NUMBER 1									
ANIMAL NUMBER	81-014	81-016	81-017	81-018	81-019	81-020	81-021	81-023	81-024	81-025
PITUITARY		X	X	X	X	X		X		X
Cysts							P			
Chromophobe Hyperplasia	P								P	
Chromophobe Adenoma										
Vascular Ectasia										
THYROID	X	X	X	X	X	X	X	X	X	X
Follicular Size										
Epithelial Heighth										
ADRENAL	X	X	X	X	X	X	X	X	X	X
Cortical Nodular Hyperplasia										
Vacuolation of Cells in Zona Fasciculata										
HEART	X			X	X	X	X	X		
Focal Myocarditis		P	P						P	P
SPLEEN										
Extramedullary Hematopoiesis	1-2	1	2	1-2	3	1	1	2	3	4
Pigment	4	2	3-4	4	3	2	3	3	3	4
LUNG										
Bronchiectasis				P	P	P				
Peribronchial Lymphoid Hyperplasia	3	2	4	5	5	5	2	4	4	1
Perivascular Lymphoid Hyperplasia	3	2			2					1
Squamous Metaplasia of Bronchial Epithelium			P	P	P	P		P		
Focal Pneumonitis									P	
LIVER			X				X			
Bile Duct Hyperplasia										
Hepatitis										
Pericholangitis	2	1		1	1	1		1		2
Hypertrophic Nodule									P	

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

	MALES - CONTINUED									
	GROUP NUMBER									
	1 - Continued									
ORGANS / ANIMAL NUMBER	81-014	81-016	81-017	81-018	81-019	81-020	81-021	81-023	81-024	81-025
KIDNEY	X	X		X						
Cast Formation			P		P	P	P		P	
Interstitial Nephritis			2-3		1	3	2-3	2	2	1
Regenerative Epithelium			P		P	P	P	P	P	P
Tubular Dilatation			P		P	P	P		P	
Cysts						P				
Interstitial Fibrosis						P	P	P		
Focal Suppurative Nephritis							P			
STOMACH	X	X	X	X	X	X	X	X	X	X
PANCREAS	X	X	X	X				X	X	X
Fibrosis						P	P			
Focal Atrophy					P	P				
MALL INTESTINE	X	X	X	X	X	X	X	X	X	X
LARGE INTESTINE	X	X	X	X	X	X		X	X	X
Nematodiasis							P			
MESENTERIC LYMPH NODE	X	X	X	X	X	X	X	X	X	X
Pigment										
URINARY BLADDER	X	X	X	X	X	X	X	X	X	X
TESTIS	X		X	X	X	X	X	X	X	X
Testicular Atrophy		P								
Unilateral Aspermatogenesis		P								
Unilateral Hypospermatogenesis										
BONE MARROW	X	X	X	X	X	X		X	X	X
Reduced Hematogenic Activity							P			

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	MALES - CONTINUED				
	GROUP NUMBER				
	2				
ANIMAL NUMBER	81-116	81-117	81-118	81-119	81-120
PITUITARY					
Cysts					
Chromophobe Hyperplasia					
Chromophobe Adenoma					
Vascular Ectasia					
THYROID					
Follicular Size					
Epithelial Heighth					
ADRENAL					
Cortical Nodular Hyperplasia					
Vacuolation of Cells in Zona Fasciculata					
Vascular Ectasia					
HEART					
Focal Myocarditis					
SPLEEN					
Extramedullary Hematopoiesis					
Pigment					
LUNG					
Bronchiectasis					
Peribronchial Lymphoid Hyperplasia			5		
Perivascular Lymphoid Hyperplasia			2		
Squamous Metaplasia of Bronchial Epithelium			P		
Focal Pneumonitis					
LIVER					
Bile Duct Hyperplasia					
Hepatitis		P			
Pericholangitis	1-2	1	2	1	1
Hypertrophic Nodule					

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

	MALES - CONTINUED				
	GROUP NUMBER				
	2 - Continued				
ORGANS / ANIMAL NUMBER	81-116	81-117	81-118	81-119	81-120
KIDNEY					
Cast Formation	P	P	P		
Interstitial Nephritis	2	1	4	1	1-2
Regenerative Epithelium	P		P	P	P
Tubular Dilatation	P	P	P		
Cysts					
Interstitial Fibrosis			P		
Focal Suppurative Nephritis					
STOMACH					
PANCREAS					
Fibrosis					
Focal Atrophy					
SMALL INTESTINE					
LARGE INTESTINE					
Nematodiasis					
MESENTERIC LYMPH NODE					
Pigment					
URINARY BLADDER					
TESTIS					
Testicular Atrophy					
Unilateral Aspermatogenesis					
Unilateral Hypospermatogenesis					
BONE MARROW					
Reduced Hematogenic Activity					

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	MALES - CONTINUED				
	GROUP NUMBER				
	3				
ANIMAL NUMBER	81-176	81-177	81-178	81-179	81-180
PITUITARY					
Cysts					
Chromophobe Hyperplasia					
Chromophobe Adenoma					
Vascular Ectasia					
THYROID					
Follicular Size					
Epithelial Heighth					
ADRENAL					
Cortical Nodular Hyperplasia					
Vacuolation of Cells in Zona Fasciculata					
Vascular Ectasia					
HEART					
Focal Myocarditis					
SPLEEN					
Extramedullary Hematopoiesis					
Pigment					
LUNG					
Bronchiectasis		P			
Peribronchial Lymphoid Hyperplasia		5			4
Perivascular Lymphoid Hyperplasia					3
Squamous Metaplasia of Bronchial Epithelium		P			
Focal Pneumonitis					
LIVER					
Bile Duct Hyperplasia		2		1	2
Hepatitis	P				
Pericholangitis	2-3	1	1-2	1	2
Hypertrophic Nodule					

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

	MALES - CONTINUED				
	GROUP NUMBER				
	3 - Continued				
ORGANS / ANIMAL NUMBER	81-176	81-177	81-178	81-179	81-180
KIDNEY		X			
Cast Formation	P				P
Interstitial Nephritis	2-3		1	1	1
Regenerative Epithelium	P		P	P	P
Tubular Dilatation	P				P
Cysts					
Interstitial Fibrosis	P				
Focal Suppurative Nephritis					
STOMACH					
PANCREAS					
Fibrosis					
Focal Atrophy					
SMALL INTESTINE					
LARGE INTESTINE					
Nematodiasis					
MESENTERIC LYMPH NODE					
Pigment					
URINARY BLADDER					
TESTIS					
Testicular Atrophy					
Unilateral Aspermatogenesis					
Unilateral Hypospermatogenesis					
BONE MARROW					
Reduced Hematogenic Activity					

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	MALES - CONTINUED GROUP NUMBER 4				
ANIMAL NUMBER	81-235	81-236	81-237	81-239	81-240
PITUITARY	X	X	X	X	X
Cysts					
Cyromophobe Hyperplasia					
Chromophobe Adenoma					
Vascular Ectasia					
THYROID	X	X	X	X	X
Follicular Size					
Epithelial Heighth					
ADRENAL	X	X	X	X	X
Cortical Nodular Hyperplasia					
Vacuolation of Cells in Zona Fasciculata					
Vascular Ectasia					
HEART	X			X	X
Focal Myocarditis		P	P		
SPLEEN					
Extramedullary Hematopoiesis	3	2	3-4	1-2	2
Pigment	4	4	4	3	4
LUNG					
Bronchiectasis					
Peribronchial Lymphoid Hyperplasia					
Perivascular Lymphoid Hyperplasia					
Squamous Metaplasia of Bronchial Epithelium					
Focal Pneumonitis					
LIVER					
Bile Duct Hyperplasia					1
Hepatitis		P			
Pericholangitis	1	2	2	1-2	1-2
Hypertrophic Nodule					

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	MALES - CONTINUED				
	GROUP NUMBER				
	4 - Continued				
ANIMAL NUMBER	81-235	81-236	81-237	81-239	81-240
KIDNEY	X				
Cast Formation					P
Interstitial Nephritis		1	1	2	2
Regenerative Epithelium				P	P
Tubular Dilatation					P
Cysts					
Interstitial Fibrosis					
Focal Suppurative Nephritis					
STOMACH	X	X	X	X	X
PANCREAS	X	X	X		
Fibrosis					P
Focal Atrophy				P	
MALL INTESTINE	X	X	X	X	X
LARGE INTESTINE	X	X	X		X
Nematodiasis				P	
MESENTERIC LYMPH NODE	X	X	X	X	X
Pigment					
URINARY BLADDER	X	X	X	X	X
TESTIS		X	X	X	X
Testicular Atrophy	P				
Unilateral Aspermatogenesis					
Unilateral Hypospermatogenesis	P				
BONE MARROW	X	X	X	X	X
Reduced Hematogenic Activity					

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

	FEMALES									
	GROUP NUMBER									
	1									
ORGANS / ANIMAL NUMBER	81-076	81-077	81-078	81-079	81-080	81-081	81-082	81-083	81-084	81-085
PITUITARY			X	X	X	X	X	X	X	X
Cysts										
Chromophobe Hyperplasia	P									
Chromophobe Adenoma		P								
Vascular Ectasia	P									
THYROID	X	X	X	X	X	X	X	X	X	X
Follicular Size										
Epithelial Heighth										
ADRENAL	X	X	X			X	X	X	X	
Cortical Nodular Hyperplasia				P						P
Vacuolation of Cells in Zona Fasciculata				1-2	1					1-2
Vascular Ectasia					P					
HEART	X	X	X	X		X	X		X	
Focal Myocarditis					P			P		P
SPLEEN									N	
Extramedullary Hematopoiesis	3	2	1-2	3	3	2-3		3		2
Pigment	5	3	3-4	4	4	4	5	5		4
LUNG										
Bronchiectasis	P			P			P			P
Peribronchial Lymphoid Hyperplasia	5	2	4	4	5	3	5	2	2	5
Perivascular Lymphoid Hyperplasia			2		2		2	2		
Squamous Metaplasia of Bronchial Epithelium	P			P	P		P			P
Focal Pneumonitis										P
LIVER					X					
Bile Duct Hyperplasia		1		1		2		1		
Hepatitis							P			
Pericholangitis	1	2	1	2		1	1	1	1	1
Hypertrophic Nodule										

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

	FEMALES - CONTINUED									
	GROUP NUMBER									
	1 - Continued									
ORGANS / ANIMAL NUMBER	81-076	81-077	81-078	81-079	81-080	81-081	81-082	81-083	81-084	81-085
KIDNEY			X	X	X	X	X	X		X
Cast Formation		P								
Interstitial Nephritis	1	1							1	
Regenerative Epithelium		P							P	
Tubular Dilatation		P								
Cysts										
Interstitial Fibrosis										
Focal Suppurative Nephritis										
STOMACH	X	X	X	X	X	X	X	X	X	X
PANCREAS	X	X	X	X	X	X	X	X	X	X
Fibrosis										
Focal Atrophy										
SMALL INTESTINE	X	X	X	X	X	X	X	X	X	X
LARGE INTESTINE		X	X	X	X		X	X	X	X
Nematodiasis	P					P				
MESENTERIC LYMPH NODE	X	X	X			X	X	X	X	X
Pigment				3	2-3					
URINARY BLADDER	X	X	X	X	X	X	X	X	X	X
OVARY										
Incomplete Activity	P		P	P	P	P		P	P	
Complete Cyclic Activity		P					P			P
BONE MARROW	X	X	X	X	X	X	X	X	X	X
Reduced Hematogenic Activity										
UTERUS										
Cystic Endometrial Hyperplasia				P						
Distended Lumen										

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	FEMALES - CONTINUED GROUP NUMBER 2				
ANIMAL NUMBER	81-146	81-147	81-148	81-149	81-150
PITUITARY					
Cysts	P				
Chromophobe Hyperplasia	P				P
Chromophobe Adenoma					
Vascular Ectasia	P				P
THYROID					
Follicular Size					
Epithelial Heighth					
ADRENAL					
Cortical Nodular Hyperplasia					
Vacuolation of Cells in Zona Fasciculata					1-2
Vascular Ectasia					P
HEART					
Focal Myocarditis					
SPLEEN					
Extramedullary Hematopoiesis					
Pigment					
LUNG					
Bronchiectasis					
Peribronchial Lymphoid Hyperplasia					
Perivascular Lymphoid Hyperplasia					
Squamous Metaplasia of Bronchial Epithelium					
Focal Pneumonitis					
LIVER			X		
Bile Duct Hyperplasia		1			1
Hepatitis					
Pericholangitis	1	1		1	
Hypertrophic Nodule					

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	FEMALES - CONTINUED				
	GROUP NUMBER				
	2 - Continued				
ANIMAL NUMBER	81-146	81-147	81-148	81-149	81-150
KIDNEY				X	X
Cast Formation					
Interstitial Nephritis	1	1	1		
Regenerative Epithelium		P	P		
Tubular Dilatation					
Cysts					
Interstitial Fibrosis					
Focal Suppurative Nephritis					
STOMACH					
PANCREAS					
Fibrosis					
Focal Atrophy					
SMALL INTESTINE					
LARGE INTESTINE					
Nematodiasis					
MESENTERIC LYMPH NODE					
Pigment					
URINARY BLADDER					
OVARY					
Incomplete Activity					
Complete Cyclic Activity					
BONE MARROW					
Reduced Hematogenic Activity					
UTERUS					
Cystic Endometrial Hyperplasia					
Distended Lumen	P				

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	FEMALES - CONTINUED GROUP NUMBER 3				
ANIMAL NUMBER	81-205	81-206	81-208	81-209	81-210
PITUITARY				X	
Cysts					
Chromophobe Hyperplasia					
Chromophobe Adenoma					
Vascular Ectasia					
THYROID					
Follicular Size					
Epithelial Heighth					
ADRENAL					
Cortical Nodular Hyperplasia					
Vacuolation of Cells in Zona Fasciculata					
Vascular Ectasia					
SPLEEN					
Extramedullary Hematopoiesis					
Pigment					
LUNG					
Bronchiectasis					
Peribronchial Lymphoid Hyperplasia					
Perivascular Lymphoid Hyperplasia					
Squamous Metaplasia of Bronchial Epithelium					
Focal Pneumonitis					
LIVER	X	X			
Bile Duct Hyperplasia				1	
Hepatitis					
Pericholangitis			1	1	2
Hypertrophic Nodule					

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

	FEMALES - CONTINUED				
	GROUP NUMBER				
	3 - Continued				
ORGANS / ANIMAL NUMBER	81-205	81-206	81-208	81-209	81-210
KIDNEY	X	X	X	X	X
Cast Formation					
Interstitial Nephritis					
Regenerative Epithelium					
Tubular Dilatation					
Cysts					
Interstitial Fibrosis					
Focal Suppurative Nephritis					
STOMACH					
PANCREAS					
Fibrosis					
Focal Atrophy					
SMALL INTESTINE					
LARGE INTESTINE					
Nematodiasis					
MESENTERIC LYMPH NODE					
Pigment					
URINARY BLADDER					
OVARY					
Incomplete Activity					
Complete Cyclic Activity					
BONE MARROW					
Reduced Hematogenic Activity					
UTERUS					
Cystic Endometrial Hyperplasia				P	
Distended Lumen		P			

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

ORGANS	FEMALES - CONTINUED GROUP NUMBER 4				
ANIMAL NUMBER	81-266	81-267	81-268	81-269	81-270
PITUITARY	X	X	X	X	X
Cysts					
Chromophobe Hyperplasia					
Chromophobe Adenoma					
Vascular Ectasia					
THYROID	X	X	X	X	X
Follicular Size					
Epithelial Heighth					
ADRENAL	X	X	X		X
Cortical Nodular Hyperplasia					
Vacuolation of Cells in Zona Fasciculata					
Vascular Ectasia				P	
HEART	X	X		X	X
Focal Myocarditis			P		
SPLEEN					
Extramedullary Hematopoiesis	2	1-2	2	2	2
Pigment	3-4	4	4	5	3
LUNG					
Bronchiectasis				P	
Peribronchial Lymphoid Hyperplasia				5	
Perivascular Lymphoid Hyperplasia					
Squamous Metaplasia of Bronchial Epithelium				P	
Focal Pneumonitis				P	
LIVER					
Bile Duct Hyperplasia	1		1		1
Hepatitis					
Pericholangitis	1	1	1	1	1
Hypertrophic Nodule			P		

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 52

	FEMALES - CONTINUED				
	GROUP NUMBER				
	4 - Continued				
ORGANS / ANIMAL NUMBER	81-266	81-267	81-268	81-269	81-270
KIDNEY	X	X	X		
Cast Formation					
Interstitial Nephritis					1
Regenerative Epithelium				P	
Tubular Dilatation					
Cysts					
Interstitial Fibrosis					
Focal Suppurative Nephritis					
STOMACH	X	X	X	X	X
PANCREAS	X	X	X	X	X
Fibrosis					
Focal Atrophy					
SMALL INTESTINE	X	X	X	X	X
LARGE INTESTINE	X	X	X	X	X
Nematodiasis					
MESENTERIC LYMPH NODE	X	N	N	X	X
Pigment					
URINARY BLADDER	N	X	X	X	X
OVARY					N
Incomplete Activity	P		P	P	
Complete Cyclic Activity		P			
BONE MARROW	X	X	X	X	X
Reduced Hematogenic Activity					
UTERUS					
Cystic Endometrial Hyperplasia					
Distended Lumen		P		P	

KEY TO DETAILED HISTOPATHOLOGY INCIDENCE TABLE

NS	=	No Section
X	=	Not Remarkable
P	=	Present
1	=	Minimal
2	=	Slight
3	=	Moderate
4	=	Moderately severe
5	=	Severe

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - MALES 1									
ANIMAL NUMBER	80-979	80-980	80-981	80-985	80-989	80-990	80-993	80-997	80-999	81-000
PITUITARY	X						NS	X		
Chromophobe Hypertrophy (Focal)		P								
Chromophobe Hyperplasia (Focal)									P	
Chromophobe Adenoma			P							
Vascular Ectasia			P	P		P			P	P
Microcysts					P					
Congestion				P		P				
THYROID										
Follicular Size	3-4	3	3-4	3-4	3-4	3-4	3-4	3	3-4	4
Follicular Epithelium (Height)	3-4	3	2-3	3	3	3	3	3	3	3
Focal Hyperplasia										
Carcinoma										
ADRENAL				X		X				
Cortical Cell Hypertrophy (Focal)	P	P							P	
Cortical Cell Hypertrophy (Diffuse)										
Cortical Cell Hyperplasia										
Vacuolar Degeneration										
Vascular Ectasia							P			
Congestion			P		P					P
Thrombosis										
Pheochromocytoma							P	P		
HEART						X				X
Non-suppurative Myocarditis			P							
Myocardial Fibrosis	P	P		P	P		P	P	P	
SPLEEN										
Pigment	4	2	5	5	4	4	5	3	3	1
Hematogenic Activity	2	3	1	1	2	1	2	2	3	1
LIVER	X									
Non-suppurative Hepatitis										
Non-suppurative Pericholangitis		1	2	2	1		1		1	1
Bile Duct Proliferation		1	2	2	1		1	2		1
Hepatocyte Hypertrophy (Focal)					P		P			
Vacuolated Hepatocytes										
Congestion			P		P	P		P		
Tapeworm Cyst										
Artifact										P

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - MALES 1									
ANIMAL NUMBER	80-979	80-980	80-981	80-985	80-989	80-990	80-993	80-997	80-999	81-000
KIDNEY										
Interstitial Nephritis	1	2	3	2	1	2	5	3	5	2
Dilated Pelvis	P	P								
Calculi										
Congestion				P	P	P				
Cysts										
STOMACH	X	X	X		X			X	X	X
Ulceration										
Acanthosis										
Hemorrhage							P			
Mineralization							P			
Congestion				P		P				
Periarteritis										
SMALL INTESTINE	X	X	X	X	X	X	X	X	X	
Congestion										
Pigment										P
LARGE INTESTINE		X	X	X	X	X	X	X	X	X
Congestion										
Nematodes	P									
PANCREAS	X	X	X	X	X	X	X		X	X
Periarteritis								P		
MESENTERIC LYMPH NODE		X	X	NS		NS	X	X	X	X
Congestion	P									
Pigment	P				P					
URINARY BLADDER	X	X	X	X	X		NS	X	X	X
Congestion						P				
TESTIS										
Normal Spermatogenic Activity	P		P	P	P	P	P	P	P	P
Hypospermatogenesis										
Aspermatogenesis (Unilateral)										
Atrophy										
Periarteritis							P			
Interstitial Cell Tumor		P								
BONE MARROW	X	X	X	X	X	X	X	X	X	X
R.E. Hyperplasia										

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - MALES 1									
ANIMAL NUMBER	80-979	80-980	80-981	80-985	80-989	80-990	80-993	80-997	80-999	81-000
UNUSUAL LESIONS										
Cutaneous Ulceration (Paws)		P								P
Atrophy of Seminal Vesicles										P
Subcutaneous Abscess										
TISSUE MASSES										
Fibroma		P								
Sarcoma										
Keratoacanthoma										
CERVICAL LYMPH NODE										
R.E. Hyperplasia										

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

	GROUPS					MALES				
	2					3				
ANIMAL NUMBER	81-099	81-106	81-108	81-111	81-109	81-156	81-173	81-161	81-163	81-174
ORGANS										
LIVER										
Non-suppurative Hepatitis	P									
Non-suppurative Pericholangitis	3		1	2	2	2		1	1	1
Bile Duct Proliferation	3		1		2	2		1	1	2
Hepatocyte Hypertrophy (Focal)		P		P			P			
Vacuolated Hepatocytes		P		P			P			
Congestion		P							P	
KIDNEY										
Interstitial Nephritis	1	2	2	5	2	1	3	3	4	3
Congestion	P	P				P				
Cysts	P									

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - MALES 4									
ANIMAL NUMBERS	81-217	81-220	81-221	81-222	81-224	81-226	81-227	81-231	81-232	81-233
PITUITARY			X						X	
Chromophobe Hypertrophy (Focal)					P	P				
Chromophobe Hyperplasia (Focal)		P								
Chromophobe Adenoma							P			
Vascular Ectasia								P		P
Microcysts				P		P		P		
Congestion	P	P		P		P				
THYROID										
Follicular Size	3	3-4	3-4	3	3-4	3	3-4	3	3-4	3
Follicular Epithelium (Height)	3	3	3	3	3	3	3	3	3	3
Focal Hyperplasia										
Carcinoma										
ADRENAL				X		X	X	X		
Cortical Cell Hypertrophy (Focal)	P	P	P						P	P
Cortical Cell Hypertrophy (Diffuse)										
Cortical Cell Hyperplasia					P					
Vacuolar Degeneration			P							
Vascular Ectasia	P	P								
Congestion		P								
Thrombosis										P
Pheochromocytoma										
HEART		X	X			X			X	
Non-suppurative Myocarditis							P			
Myocardial Fibrosis	P			P	P		P	P		P
SPLEEN										
Pigment	3	4	3	3	4	4	3	2	1	2
Hematogenic Activity	3	1	1	3	2	2	1	2	2	2
LIVER						X			X	
Non-suppurative Hepatitis										
Non-suppurative Pericholangitis	1	1		1	2		2	2		2
Bile Duct Proliferation	1			1	2			1		
Hepatocyte Hypertrophy (Focal)								P		
Vacuolated Hepatocytes								P		
Congestion				P						
Tapeworm Cyst			P							
Artifact	P									

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - MALES 4									
ANIMAL NUMBER	81-217	81-220	81-221	81-222	81-224	81-226	81-227	81-231	81-232	81-233
KIDNEY										
Interstitial Nephritis	4	3	2	3	4	1		2	1	2
Dilated Pelvis										
Calculi										
Congestion		P	P	P		P	P	P	P	P
Cysts										
STOMACH	X	X	X	X			X	X	X	
Ulceration										P
Acanthosis										P
Hemorrhage										
Mineralization										
Congestion						P				
Periarteritis					P					
SMALL INTESTINE	X	X	X	X	X		X	X	X	X
Congestion						P				
Pigment										
LARGE INTESTINE	X	X	X	X	X		X	X		X
Congestion						P				
Nematodes									P	
PANCREAS	X	X	X	X		X		X	X	X
Periarteritis					P		P			
MESENTERIC LYMPH NODE	X			X	X	X	X	X	X	X
Congestion										
Pigment		P	P							
URINARY BLADDER	X	X	X	X	X	X	X	X	X	X
Congestion										
TESTIS										
Normal Spermatogenic Activity	P	P	P		P	P		P	P	P
Hypospermatogenesis				P						
Aspermatogenesis (Unilateral)							P			
Atrophy				P			P			
Periarteritis					P					
Interstitial Cell Tumor										
BONE MARROW	X	X	X	X	X	X	X		X	X
R.E. Hyperplasia								P		

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - MALES 4									
ANIMAL NUMBER	81-217	81-220	81-221	81-222	81-224	81-226	81-227	81-231	81-232	81-233
UNUSUAL LESIONS										
Cutaneous Ulceration (Paws)									P	
Atrophy of Seminal Vesicles										
Subcutaneous Abscess					P					
TISSUE MASSES										
Fibroma										
Sarcoma	P									
Keratoacanthoma		P								
CERVICAL LYMPH NODE										
R.E. Hyperplasia								P		

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - FEMALES 1									
ANIMAL NUMBER	81-036	81-037	81-053	81-055	81-056	81-060	81-064	81-066	81-068	81-072
PITUITARY										
Chromophobe Hypertrophy (Focal)						P				
Chromophobe Hyperplasia (Focal)	P				P		P	P		
Chromophobe Adenoma	P	P	P	P				P		P
Vascular Ectasia	P	P	P	P		P	P	P	P	P
Microcysts					P					
Congestion										
THYROID										
Follicular Size	3-4	3	3-4	3	3-4	3-4	3-4	3	3-4	3-4
Follicular Epithelium (Height)	3	3	3	3	3	3	3	3	3	3
Focal Hyperplasia						P				
Carcinoma	P									
ADRENAL										
Cortical Cell Hypertrophy (Focal)		P	P	P	P	P			P	P
Cortical Cell Hypertrophy (Diffuse)	P						P	P		
Cortical Cell Hyperplasia										
Vacuolar Degeneration		P	P		P	P	P	P	P	P
Vascular Ectasia	P	P	P	P	P	P	P	P	P	P
Congestion										
Thrombosis							P	P		
Pheochromocytoma										
HEART	X	X	X				X	X		
Non-suppurative Myocarditis										
Myocardial Fibrosis				P	P	P			P	P
SPLEEN										
Pigment	3	4	2	4	3	3	3	5	5	3
Hematogenic Activity	5	1	3	1	3	3	4	1	3	4
LIVER				X						
Non-suppurative Hepatitis										
Non-suppurative Pericholangitis	2	1	1			1			2	
Bile Duct Proliferation			1		1	1	1	2		
Hepatocyte Hypertrophy (Focal)										P
Vacuolated Hepatocytes	P									P
Congestion					P					
Tapeworm Cyst										
Artifact			P							

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - FEMALES 1									
ANIMAL NUMBER	81-036	81-037	81-053	81-055	81-056	81-060	81-064	81-066	81-068	81-072
KIDNEY			X							
Interstitital Nephritis	2			1			2			
Dilated Pelvis	P									
Calculi										P
Congestion	P	P			P	P		P	P	P
Cysts										
Artifact						P				
STOMACH	X		X	X	X	X			X	X
Ulceration										
Acanthosis										
Hemorrhage										
Mineralization										
Congestion		P						P		
Gastritis							P			
SMALL INTESTINE	X	X	X	X	X	X	X	X	X	X
Congestion										
Pigment										
LARGE INTESTINE	X	X	X	X	X	X	X	X	X	X
Congestion										
Nematodes										
PANCREAS	X	X	X	X	X	X	X	X		X
Periarteritis									P	
MESENTERIC LYMPH NODE	X	X	X	X	X		X	X	NS	X
Congestion						P				
Pigment										
URINARY BLADDER	X	X	X	X	X	X	X	X	X	X
Congestion										
OVARY	X	X	X	X	NS		X			X
Salpingitis		P				P			P	
Follicular Cyst								P	P	
Paraovarian Cyst										
BONE MARROW	X	X	X	X	X	X	X	X	X	X
R.E. Hyperplasia										

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - FEMALES 1									
ANIMAL NUMBER	81-036	81-037	81-053	81-055	81-056	81-060	81-064	81-066	81-068	81-072
MAMMARY GLAND										
Fibroadenoma/Adenofibroma	P	P		P	P	P	P	P	P	P
Adenocarcinoma	P						P			P
Galactocele						P				
OTHER TISSUE MASSES										
Fibroma	P									
Hemangiopericytoma										
UNUSUAL LESIONS										
UTERUS										
Endometrial Polyp										
Cystic Endometrial Hyperplasia						P	P			
Metritis						P				
CERVICAL LYMPH NODES										
R.E. Hyperplasia	P									

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUPS - FEMALES									
	2					3				
ANIMAL NUMBER	81-130	81-132	81-134	81-138	81-141	81-186	81-191	81-199	81-201	81-202
LIVER			X							
Non-suppurative Pericholangitis				2			2	1	2	
Bile Duct Proliferation	1						2	2	2	
Hepatocyte Hypertrophy (Focal)		P			P					
Vacuolated Hepatocytes		P						P		
Congestion	P	P			P	P				P
KIDNEY				X						
Interstitial Nephritis					1				1	1
Congestion	P	P	P			P	P	P		
Artifact		P								
MAMMARY GLAND			X							
Fibroadenoma/Adenofibroma		P		P	P	P				P
UNUSUAL LESIONS										
Epidermal Inclusion Cysts								P		
UTERUS										
Endometrial Polyp			P	P						

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - FEMALES 4									
ANIMAL NUMBER	81-246	81-247	81-248	81-250	81-253	81-258	81-260	81-261	81-262	81-264
PITUITARY				X						
Chromophobe Hypertrophy (Focal)	P	P				P				P
Chromophobe Hyperplasia (Focal)								P		
Chromophobe Adenoma			P		P	P	P		P	
Vascular Ectasia	P	P	P		P	P	P		P	
Microcysts	P						P	P		
Congestion										
THYROID		NS								
Follicular Size	3-4		3-4	3	3-4	3	3-4	4	3-4	3
Follicular Epithelium (Height)	3		3	3	3	3	3	2-3	3	2-3
Focal Hyperplasia										
Carcinoma										
ADRENAL				X			X			
Cortical Cell Hypertrophy (Focal)	P				P	P			P	
Cortical Cell Hypertrophy (Diffuse)			P							P
Cortical Cell Hyperplasia										
Vacuolar Degeneration			P						P	
Vascular Ectasia	P	P	P			P		P	P	P
Congestion										
Thrombosis		P								
Pheochromocytoma										
HEART	X		X	X	X	X	X	X	X	X
Non-suppurative Myocarditis										
Myocardial Fibrosis		P								
SPLEEN										
Pigment	5	5	5	4	5	5	2	3	3	4
Hematogenic Activity	2	2	3	2	2	2	4	3	5	1
LIVER						X				
Non-suppurative Hepatitis										
Non-suppurative Pericholangitis		1	1	1	1		2	1		1
Bile Duct Proliferation			1	1			2			
Hepatocyte Hypertrophy (Focal)										
Vacuolated Hepatocytes					P				P	
Congestion	P		P						P	
Tapeworm Cyst										
Artifact										

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

	GROUP - FEMALES 4									
ORGANS / ANIMAL NUMBER	81-246	81-247	81-248	81-250	81-253	81-258	81-260	81-261	81-262	81-264
KIDNEY	X						X			
Interstitital Nephritis								1		1
Dilated Pelvis										
Calculi										
Congestion		P	P	P	P	P		P	P	P
Cysts										
Artifact										
STOMACH	X	X	X	X	X	X	X	X		X
Ulceration										
Acanthosis									P	
Hemorrhage										
Mineralization										
Congestion										
Periarteritis										
SMALL INTESTINE	X	X	X	X	X	X	X	X	X	X
Congestion										
Pigment										
LARGE INTESTINE	X	X	X	X	X	X	X	X	X	X
Congestion										
Nematodes										
PANCREAS	X	X	X	X	X	X	X	X	X	
Periarteritis										P
MESENTERIC LYMPH NODE	X	X	X	X		X	X	X	X	X
Congestion										
Pigment					P					
URINARY BLADDER	X	X	X	X	X	X	X	X	X	X
Congestion										
OVARY				X		NS	X	X		X
Salpingitis		P			P					
Follicular Cyst					P					
Paraovarian Cyst	P		P						P	
BONE MARROW	X	X	X	X	X	X	X	X	X	X
R.E. Hyperplasia										

TABLE NO. 6 - DETAILED HISTOPATHOLOGY INCIDENCE TABLE
WEEK 104

ORGANS	GROUP - FEMALES 4									
ANIMAL NUMBER	81-246	81-247	81-248	81-250	81-253	81-258	81-260	81-261	81-262	81-264
MAMMARY GLAND	X									
Fibroadenoma/Adenofibroma		P				P	P			
Adenocarcinoma										
Galactocele										
OTHER TISSUE MASSES										
Fibroma										
Hemangiopericytoma							P			
UNUSUAL LESIONS										
UTERUS										
Endometrial Polyp										
Cystic Endometrial Hyperplasia										
Metritis				P						
CERVICAL LYMPH NODES										
R.E. Hyperplasia										

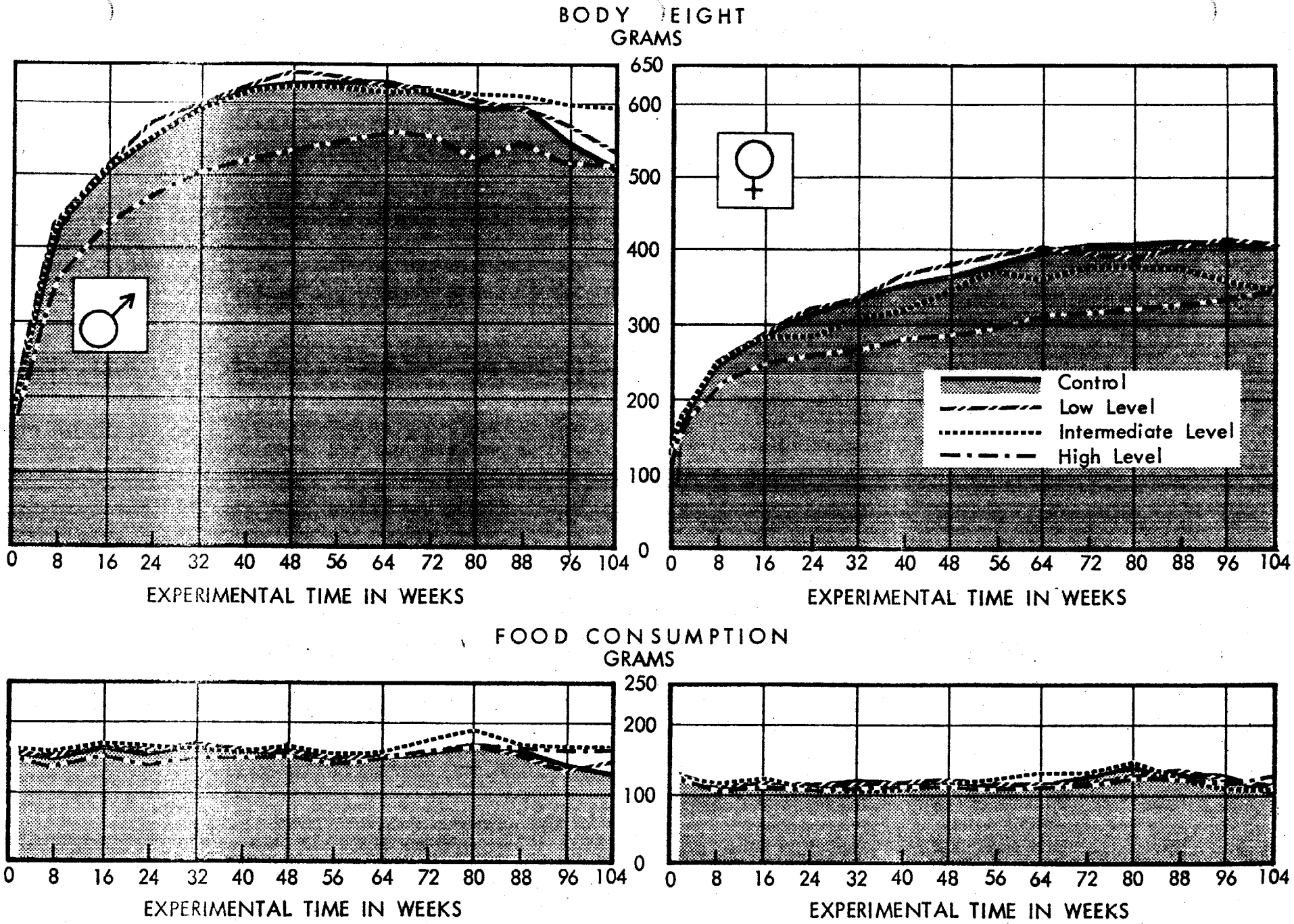

Figure 1 MEAN BODY WEIGHT AND FOOD CONSUMPTION FOR MALE AND FEMALE ALBINO RATS WHICH SERVED AS CONTROLS OR RECEIVED THE INDICATED DIETARY LEVELS OF X-5120 FOR 104 WEEKS

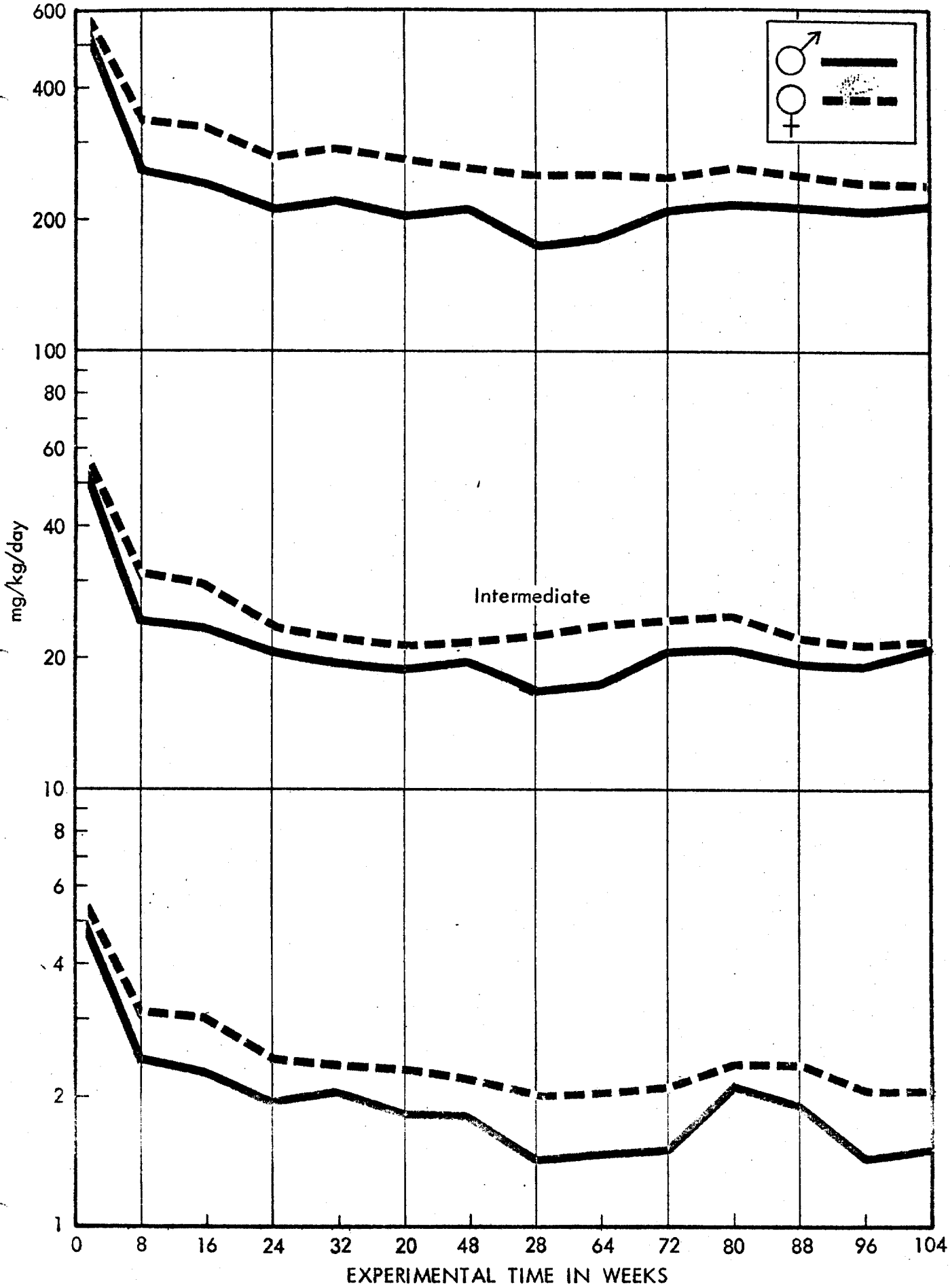

Figure 2 MEAN COMPOUND CONSUMPTION FOR MALE AND FEMALE ALBINO RATS WHICH RECEIVED THE INDICATED DIETARY LEVELS OF X-5120 FOR 104 WEEKS

HISTOPATHOLOGICAL EVALUATION OF MALE AND FEMALE ALBINO RATS
SACRIFICED AT TERMINATION

GROUP NO. 1
Male/Rat/No. 80-979

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in size and lined by cuboidal to plump cuboidal epithelium.
Adrenal gland:	
No alterations observed.	Small area of cortical cell hypertrophy in the zona fasciculata.
Heart:	
No alterations observed.	Area of diffuse myocardial fibrosis in the left ventricular wall.
Spleen:	
No alterations observed.	Moderately large amount of brown granular pigment. Slight extramedullary hematopoiesis.
Kidney:	
Pelvis of one kidney was dilated.	Pelvis of one kidney was dilated. Minimal interstitial nephritis was present with occasional dilated tubules containing proteinaceous casts and small numbers of mononuclear inflammatory cells.
Large intestine:	
No alterations observed.	Cross-section of nematode parasites in the lumen.

GROUP NO. 1
Male/Rat/No. 80-979 (continued)

GROSS	MICROSCOPIC
Mesenteric lymph node:	
No alterations observed.	The node was markedly congested along with a moderate amount of hemosiderin and macrophages.
Testes:	
No alterations observed	Normal spermatogenic activity.

The following organs were not altered grossly or microscopically: pituitary, liver, stomach, small intestine, pancreas, urinary bladder or bone marrow.

GROUP NO. 1
Male/Rat/No. 80-980

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Small focal area of chromophobe hypertrophy.
Thyroid:	
No alterations observed.	Most follicles moderate in size and lined by cuboidal epithelium.
Adrenal gland:	
No altertaions observed.	Small area of cortical cell hypertrophy in the zona fasciculata.
Heart:	
No alterations observed.	Small area of myocardial fibrosis.
Spleen:	
No alterations observed.	Slight amount of brown granular pigment. Moderate hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis. Minimal bile duct proliferation.
Kidneys:	
Pelvis of both kidneys dilated	Pelvis of one kidney was dilated, while the pelvis of the opposite kidney did not appear to be appreciably dilated. Slight interstitial nephritis was present with occasional dilated tubules containing proteinaceous casts, focal interstitial fibrosis. Regenerative tubule epithelium, focal accumulations of mononuclear inflammatory cells.

GROUP NO. 1
Male/Rat/No. 80-980 (continued)

GROSS	MICROSCOPIC
Testes:	
No alterations observed.	Large interstitial cell tumor was present in the center of the testis. Other smaller foci of interstitial cell hyperplasia were present throughout the testis. Normal spermatogenic activity was present in the seminiferous tubules surrounding the neoplasm.
Unusual lesions:	
A firm nodular subcutaneous tissue mass was present in the right axillary region. Mass was purplish pink in color, tough consistency and vascular.	Tissue was dense mature fibrous connective tissue with cells arranged in a whorled pattern. Diagnosis: fibroma.
An ulcerated area was present on the right hind paw.	Lesion with an ulcerated surface in which necrotic tissue debris and numerous bacterial colonies were present. Epidermis adjacent to the lesion revealed marked acanthosis. Beneath the lesion, marked fibroplasia along with increased vascularity and edema.

GROUP NO. 1
Male/Rat/No. 80-980 (continued)

GROSS	MICROSCOPIC

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder, or bone marrow.

GROUP NO. 1
Male/Rat/No. 80-981

GROSS	MICROSCOPIC
Pituitary:	
Enlarged and dark red.	Large chromophobe adenoma with marked vascular ectasia.
Thyroid:	
Appeared enlarged.	Most follicles were moderate to moderately large in size and lined by flattened to cuboidal epithelium.
Adrenal gland:	
Right adrenal had a dark red area on the surface.	Sections of adrenal examined were not remarkable except for occasional congested vessels.
Heart:	
No alterations observed.	Single small focus of non-suppurative myocarditis with mononuclear inflammatory cells and degeneration of myocardial fibers.
Spleen:	
No alterations observed	Large amount of brown granular pigment. Hematogenic activity minimal.
Liver:	
Nutmeg appearance with dark red indentations on all lobes	Moderate degree of congestion was present with distended central veins. Slight bile duct proliferation. Slight non-suppurative pericholangitis with accumulations of mononuclear inflammatory cells in the region of the portal triad.

GROUP NO. 1
Male/Rat/No. 80-981 (continued)

GROSS	MICROSCOPIC
Kidneys:	
No alterations observed	Moderate degree of interstitial nephritis with numerous dilated tubules containing proteinaceous casts. Focal areas of fibrosis, mononuclear cell accumulation, regenerative tubule epithelium Occasional sclerosed glomeruli.
Testes	
No alterations observed.	Normal spermatogenic activity.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder, or bone marrow.

GROUP NO. 1
Male/Rat/No. 80-985

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Moderate degree of congestion with vascular ectasia.
Thyroid:	
No alterations observed	Most follicles moderate to moderately large in size and lined by cuboidal epithelium.
Heart:	
No alterations observed.	Occasional scattered foci of myocardial fibrosis primarily in the subepicardial region.
Spleen:	
No alterations observed.	Large amount of brown granular pigment. Minimal hematogenic activity.
Liver:	
Nutmeg in color.	Slight bile duct proliferation. Slight non-suppurative pericholangitis.
Kidneys:	
Dark red zone between cortex and medulla.	Slight degree of congestion primarily in the cortex. Slight interstitial nephritis with occasional small focus of fibrosis. Regenerative tubule epithelium and mononuclear inflammatory cell infiltrate. Occasional dilated tubules containing proteinaceous casts.

GROUP NO. 1
Male/Rat/No. 80-985 (continued)

GROSS	MICROSCOPIC
Stomach:	
Lining of stomach was dark red	Section of stomach examined was not remarkable except for slight congestion of submucosal vessels.
Mesenteric lymph node:	
No alterations observed.	Sectinn was missing.
Testes:	
No alterations observed.	Normal spermatogenic activity.

The following organs were not altered grossly or microscopically: adrenals, small intestine, large intestine, pancreas, urinary bladder and bone marrow.

GROUP NO. 1
Male/Rat/No. 80-989

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Several small microcysts.
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in size, lined by cuboidal epithelium.
Adrenal glands:	
Chalky white in color.	Except for a moderate degree of congestion the sections examined were not remarkable.
Heart:	
No alterations observed.	Focal areas of myocardial fibrosis primarily in the sub pericardial region.
Spleen:	
No alterations observed.	Moderately large amount of brown granular pigment. Slight hematogenic activity.
Liver:	
No alterations observed.	Focal small area of hepatocyte hypertrophy. Minimal non-suppurative pericholangitis. Minimal bile duct proliferation and slight congestion.
Kidney:	
Medulla, dark pink.	Moderate degree of congestion in the renal cortex, and extending into the renal medulla. Minimal interstitial nephritis and occasional small focus of mononuclear inflammatory cells and regenerative tubule epithelium.

GROUP NO. 1
Male/Rat/No. 80-989 (continued)

GROSS	MICROSCOPIC
	In one area of interstitial nephritis, numerous fat cells and hemosiderin were present.
Mesenteric lymph node:	
No alterations observed.	Moderate degree of hemosiderin deposition.
Testes:	
No alterations observed.	Normal spermatogenic activity.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, urinary bladder or bone marrow.

GROUP NO. 1
Male/Rat/No. 80-990

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Congestion with vascular ectasia.
Thyroid:	
No alterations observed.	Follicles moderate to moderately large in size and lined by cuboidal epithelium.
Spleen:	
No alterations observed.	Moderately large amount of brown granular pigment. Minimal hematogenic activity.
Liver:	
No alterations observed.	Congestion of central veins.
Kidneys:	
Dark red zone between cortex and medulla. Medulla was dark red.	Congestion was present in both the renal cortex and medulla. Slight interstitial nephritis with focal areas of regenerative tubule epithelium and mononuclear inflammatory cells along with occasional dilated tubules containing proteinaceous casts.
Stomach:	
Lining was dark red.	Congestion of submucosal and subserosal vessels. Section otherwise not remarkable.

GROUP NO. 1
Male/Rat/No. 80-990 (continued)

GROSS	MICROSCOPIC
Mesenteric lymph node:	
No alterations observed.	Section was missing.
Urinary bladder:	
Lining was red.	Congestion in submucosal vessels.
Testes:	
Small, soft and blue	Normal spermatogenic activity.

The following organs were not altered grossly or microscopically: Adrenals, heart, small intestine, large intestine, pancreas, or bone marrow.

GROUP NO. 1
Male/Rat/No. 80-993

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Tissue was missing.
Thyroid:	
Parathyroid appeared prominent.	Sections examined were not remarkable with moderate to moderately large follicles lined by cuboidal epithelium.
Adrenal glands:	
Appeared enlarged. Dark red area on the surface of left adrenal.	Pheochromocytoma with marked vascular ectasia was present in one of the adrenal glands with marked compression of the overlying cortical tissue. Areas of necrosis were present in the center of the neoplasm.
Heart:	
No alterations observed.	Small area of myocardial fibrosis in the sub-endocardial tissue.
Spleen:	
No alterations observed.	Large amount of brown granular pigment. Slight hematogenic activity.
Liver:	
No alterations observed.	Small focus of hepatocyte hypertrophy. Minimal non-suppurative pericholangitis and bile duct proliferation.

GROUP NO. 1
Male/Rat/No. 80-993 (continued)

GROSS	MICROSCOPIC
Kidneys:	
Enlarged, greenish-tan. Cortex was rough. Medulla was purplish pink with poor differentiation between cortex and medulla. Kidney was of tough consistency.	Severe interstitial nephritis with little recognizable functional tissue. Majority of the kidneys were replaced by fibrous connective tissue. Mononuclear inflammatory cell infiltrate and large dilated tubules containing proteinaceous casts. Marked glomerulosclerosis was evident along with regenerative tubule epithelium.
Stomach:	
Thickened and dark red areas.	Scattered areas of hemorrhage and mineralization were present in the mucosa of the glandular region.
Pancreas:	
No alterations observed.	Not remarkable, however, several large muscular arteries included in the section revealed marked intimal proliferation.

GROUP NO. 1
Male/Rat/No. 80-993 (continued)

GROSS	MICROSCOPIC
Urinary bladder:	
No alterations observed.	Tissue was missing.
Testes:	
No alterations observed.	Periarteritis involving many of the small muscular arteries in the testes. Characterized by thickening of the vessel wall. Fibrinoid degeneration and perivascular accumulation of mononuclear inflammatory cells. Normal spermatogenic activity was present in the majority of seminiferous tubules.

The following organs were not altered grossly or microscopically: small intestine, large intestine, mesenteric lymph nodes, or bone marrow.

GROUP NO. 1
Male/Rat/No. 80-997

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Most follicles moderate in size and lined by cuboidal epithelium.
Adrenal gland:	
No alterations observed.	Large pheochromocytoma was present causing compression of the overlying cortical tissue.
Heart:	
No alterations observed.	Area of myocardial fibrosis.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment. Slight hematogenic activity.
Liver:	
Dark red indentations in all lobes.	Slight bile duct proliferation. Slight degree of congestion.
Kidney:	
No alterations observed.	Moderate interstitial nephritis with occasional large focus of fibrosis. Mononuclear cell infiltrate, regenerative tubule epithelium and dilated tubules containing proteinaceous casts.
Pancreas:	
Firm blue nodules throughout the pancreas.	The pancreatic tissue proper was not remarkable, however, periarteritis was present involving muscular arteries.

GROUP NO. 1
Male/Rat/No. 80-997 (continued)

GROSS	MICROSCOPIC
Testes:	
No alterations observed.	Normal spermatogenic activity.

The following organs were not altered grossly or microscopically: pituitary, stomach, small intestine, large intestine, mesenteric lymph nodes, urinary bladder, and bone marrow.

GROUP NO. 1
Male/Rat/No. 80-999

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Focal area of chromophobe hyperplasia. Vascular ectasia was also present.
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in sized and lined by cuboidal epithelium
Adrenal glands:	
Appeared slightly enlarged.	Focal areas of cortical cell hypertrophy were noted.
Heart:	
No alterations observed.	Rather large areas of myocardial fibrosis.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment. Moderate hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis.
Kidneys:	
Appeared enlarged, pale brown in color with medulla dark red in color.	Severe interstitial nephritis with minimal histologically normal renal tissue remaining. Large amounts of fibrosis, regenerative tubule epithelium; infiltration of mononuclear inflammatory cells.

GROUP NO. 1
Male/Rat/No. 80-999 (continued)

GROSS	MICROSCOPIC
	Dilated tubules containing proteinaceous casts were present.
Testis:	
Appeared soft and small	Sections of testis examined revealed normal spermatogenic activity.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, mesenteric lymph nodes, urinary bladder or bone marrow.

GROUP NO. 1
Male/Rat/No. 81-000

GROSS	MICROSCOPIC
Pituitary:	
Dark red area on surface	Pronounced vascular ectasia was present, section otherwise not remarkable.
Thyroid:	
No alterations observed.	Follicles moderately large in size and lined by cuboidal epithelium.
Adrenal gland:	
Dark brown and speckled and appeared slightly enlarged.	Both adrenals were moderately congested but were otherwise not remarkable.
Spleen:	
Appeared very small and pale.	Minimal pigment and minimal hematogenic activity. Spleen was markedly constricted with little blood present. The primary cell population of the spleen consisted of diffuse pleocellular mixture of macrophages and plasma cells with little prominence of the germinal centers.
Liver:	
Left lateral lobe contained a firm gray nodule surrounded by a red zone penetrating throughout the entire lobe.	Lesion described grossly was apparently incurred at time of euthanasia as the degenerative changes and hemorrhage were of recent origin.

GROUP NO. 1
Male/Rat/No. 81-000 (continued)

GROSS	MICROSCOPIC
	Minimal non-suppurative pericholangitis and bile duct proliferation were noted in the remainder of the sections.
Kidneys:	
No alterations observed	Slight interstitial nephritis with focal areas of regenerative tubule epithelium. Mononuclear inflammatory cells and dilated tubules containing proteinaceous casts.
Stomach:	
Small dark red ulcerated areas in lining.	Lesions described grossly were not apparent on small section of stomach examined.
Small and large intestine:	
Entire G.I. tract contained black material.	Microscopic of small intestine revealed focal accumulations of brown granular pigment in macrophages in the tips of villi. Large intestine was microscopically not remarkable.
Testes:	
Appeared small.	Sections examined revealed normal spermatogenic activity.

GROUP NO. 1
Male/Rat/No. 81-000 (continued)

GROSS	MICROSCOPIC
Unusual lesions:	
Ulcerated areas were present on both hind feet.	Severe ulceration with large numbers of bacterial colonies and necrotic debris on the surface along with marked fibroplasia and marked vascularity of the underlying tissue.
	Focal accumulations of neutrophils were present throughout the lesion.
Seminal vesicles:	
Appeared small	Seminal vesicles were essentially normal in appearance although apparently slightly reduced in size with decreased quantity of secretion present.

The following organs were not altered grossly or microscopically: heart, pancreas, mesenteric lymph nodes, urinary bladder, and bone marrow.

GROUP NO. 2
Male/Rat/No. 81-099

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Several focal areas of non-suppurative hepatitis, characterized by reticulo-endothelial cell proliferation.
	Moderate non-suppurative pericholangitis and moderate bile duct proliferation.
Kidneys:	
Both kidneys had cyst-like areas on the surface of the cortex. One kidney had a cyst-like area penetrating into the medulla.	Cyst was present, extending from the capsular surface to the medullary region.
	Slight degree of congestion was present, primarily in the cortical medullary region.
	Minimal interstitial nephritis characterized by focal accumulation of mononuclear inflammatory cells.
	Regenerative tubule epithelium and dilated tubules containing proteinaceous casts.

GROUP NO. 2
Male/Rat/No. 81-106

GROSS	MICROSCOPIC
Liver:	
No alterations observed	Moderate degree of congestion
	Focal area of hepatocyte hypertrophy with increased cytoplasmic vacuolation.
Kidney:	
Dark red zone between cortex and medulla. Cortex was dark pink.	Congestion primarily at the cortical medullary junction.
	Slight interstitial nephritis and focal areas of mononuclear inflammatory cells
	Interstitial fibrosis, regenerative tubule epithelium and occasional dilated tubules containing proteinaceous casts.

GROUP NO. 2
Male/Rat/No. 81-108

GROSS	MICROSCOPIC
Liver:	
Dark red indentations on all lobes.	Minimal non-suppurative pericholangitis Minimal bile duct proliferation.
Kidneys:	
No alterations observed.	Slight interstitial nephritis with focal accumulations of mononuclear inflammatory cells. Interstitial fibrosis and regenerative tubule epithelium. Rarely dilated tubules containing proteinaceous casts.

GROUP NO. 2
Male/Rats/No. 81-111

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Occasional vacuolated hepatocytes. Single focal area of hepatocyte hypertrophy. Slight non-suppurative pericholangitis.
Kidneys:	
Greenish-brown in color. Medulla dark red in color and cortex appeared wide.	Severe interstitial nephritis with very little functional kidney tissue remaining. Large amount of interstitial fibrosis was evident along with regenerative tubule epithelium, infiltration of mononuclear inflammatory cells. Numerous dilated tubules containing proteinaceous casts. The few functional convoluted tubules remaining appeared somewhat hypertrophied with protein imbibition evident.

GROUP NO. 2
Male/Rat/No. 81-109

GROSS	MICROSCOPIC
Liver:	
No alterations observed	Slight non-suppurative pericholangitis Slight bile duct proliferation.
Kidneys:	
No alterations observed.	Slight interstitial nephritis Occasional small foci of interstitial fibrosis Regenerative tubule epithelium and mononuclear inflammatory cells Occasional dilated tubules containing proteinaceous casts were also evident.

GROUP NO. 3
Male/Rat/No. 81-156

GROSS	MICROSCOPIC
Liver:	
Nutmeg in appearance	Except for slight non-suppurative pericholangitis, and slight bile duct proliferation section was not remarkable.
Kidneys:	
Dark red zone between cortex and medulla.	Minimal interstitial nephritis with rarely a small focus of mononuclear inflammatory cells and regenerative tubule epithelium. Occasional dilated tubule containing proteinaceous casts. Slight degree of congestion at the cortical medullary junction.

GROUP NO. 3
Male/Rat/No. 81-173

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Occasional vacuolated hepatocytes. Single small focus in which hepatocyte hypertrophy was present.
Kidneys:	
No alterations observed.	Moderate degree of interstitial nephritis. Rather extensive areas of interstitial fibrosis. Regenerative tubule epithelium. Accumulations of mononuclear inflammatory cells and early glomerulosclerosis. A few dilated tubules containing proteinaceous casts.

GROUP NO. 3
Male/Rat/No. 81-161

GROSS	MICROSCOPIC
Liver:	
Nutmeg in appearance with dark red indentations on all lobes.	Minimal non-suppurative pericholangitis Minimal bile duct proliferation.
Kidneys:	
Cortex appeared wide, medulla dark pink, cut surface appeared striated.	The striated appearance noted grossly was due to moderate degree of interstitial nephritis, with areas of interstitial fibrosis, regenerative tubule epithelium and infiltration of mononuclear inflammatory cells along with dilated tubules containing proteinaceous casts.

GROUP NO. 3
Male/Rat/No. 81-163

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Slight degree of congestion
	Minimal non-suppurative pericholangitis.
	Minimal bile duct proliferation
Kidneys:	
Surface was rough with poor differentiation between cortex and medulla. Pelvis was dilated.	Moderately severe interstitial nephritis with extensive areas of interstitial fibrosis
	Regenerative tubule epithelium and numerous dilated tubules containing proteinaceous casts.
	Focal accumulations of mononuclear inflammatory cells were present throughout the section.
	Early glomerulosclerosis was present.

GROUP NO. 3
Male/Rat/No. 81-174

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis. Slight bile duct proliferation.
Kidneys:	
No alterations observed.	Moderate degree of interstitial nephritis with focal areas of interstitial fibrosis Regenerative tubule epithelium and large dilated tubules containing proteinaceous casts and infiltration of mononuclear inflammatory cells.

GROUP NO. 4
Male/Rat/No. 81-217

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Moderate degree of congestion, otherwise, not remarkable.
Thyroid:	
No alterations observed	Most follicles moderate in size and lined by cuboidal epithelium.
Adrenal glands:	
Speckled and enlarged.	Several focal areas of cortical cell hypertrophy with vascular ectasia.
Heart:	
No alterations observed.	Large area of myocardial fibrosis in the sub endocardial region.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment. Moderate hematogenic activity.
Liver:	
Dark red nodule near margin of left lateral lobe.	Nodule described grossly was a large area of hepatocytic degeneration surrounded by hemorrhagic border. Lesion was of recent origin, apparently incurred at time of euthanasia. Minimal non-suppurative pericholangitis and bile duct proliferation.

GROUP NO. 4
Male/Rat/No. 81-217 (continued)

GROSS	MICROSCOPIC
Kidneys:	
Greenish-tinge, cortex wide, dark brown zone at junction, outer medulla dark pink.	Moderately severe interstitial nephritis with focal areas of interstitial fibrosis. Mononuclear cell infiltrate Regenerative tubule epithelium and large dilated tubules containing proteinaceous casts. Protein imbibition was present in the remaining histologically normal renal tubules.
Testes:	
No alterations observed.	Normal spermatogenic activity.
Tissue mass:	
Located in the lower midline, subcutaneous, firm, yellowish and homogenous.	Neoplasm was composed of highly anaplastic appearing cells with oval to indented nuclei. Moderate numbers of mitotic figures were present and focal areas of necrosis were present throughout the neoplasm. Neoplastic cells were arranged in sheet-like masses with little evidence of differentiation. Diagnosis: undifferentiated sarcoma.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, mesenteric lymph node and urinary bladder, and bone marrow.

GROUP NO. 4
Male/Rat/No. 81-220

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Moderate degree of congestion Focal area of chromophobe hyperplasia.
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in size and lined by cuboidal epithelium.
Adrenals glands:	
Speckled.	In one adrenal, moderate congestion was present with vascular ectasia. In the opposite adrenal, a large focal area of cortical cell hypertrophy was present.
Spleen:	
No alterations observed.	Moderately large amount of brown granular pigment. Minimal hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis.
Kidney:	
Cortex was wide, medulla dark pink	Moderate degree of interstitial nephritis with focal areas of fibrosis, regenerative tubule epithelium. Mononuclear cell infiltrate and dilated tubules containing proteinaceous casts. Congestion was present at the cortico medullary junction.

GROUP NO. 4
Male/Rat/No. 81-220 (continued)

GROSS	MICROSCOPIC
Mesenteric lymph node:	
No alterations observed.	Small amount of brown granular pigment present.
Testes:	
No alterations observed.	Normal spermatogenic activity.
Lesion:	
Wart like lesion was noted on the left side of the back, firm, brown in color, contained thick white material.	Tissue examined consisted primarily of keratonaceous debris and large numbers of ghost cells. Histologic appearance suggestive of keratoacanthoma.

The following organs were not altered grossly or microscopically: heart, stomach, small intestine, large intestine, pancreas, urinary bladder and bone marrow.

GROUP NO. 4
Male/Rat/No. 81-221

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Follicles moderate to moderately large in size and lined by cuboidal epithelium.
Adrenal glands:	
No alterations observed.	Rather large focal area of cortical cell hypertrophy and vacuolar degeneration in the zona fasciculata. Additional smaller area of cortical cell hypertrophy was also noted.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment. Minimal hematogenic activity.
Liver:	
Large firm nodule near the fissure of the median lobe.	Tissue described grossly was a large cystic space containing a larval tape worm apparently cysticercus fasciolaris. With the exception of the fibrous connective tissue response surrounding the tape worm cyst the section of liver examined was not remarkable.
Kidney:	
Cortex wide, outer medulla dark pink.	Congestion at the cortico medullary junction, slight degree of interstitial nephritis and focal areas of fibrosis.

GROUP NO. 4
Male/Rat/No. 81-221 (continued)

GROSS	MICROSCOPIC
	Regenerative tubule epithelium Mononculear inflammatory cells, dilated tubules containing proteinaceous casts.
Mesenteric lymph node:	
No alterations observed.	Contained a small amount of brown granular pigment in phagocytic cells.
Testes:	
No alterations observed.	Normal spermatogenic activity.

The following organs were not altered grossly or microscopically: pituitary, heart, stomach, small intestine, large intestine, pancreas, urinary bladder and bone marrow.

GROUP NO. 4
Male/Rat/No. 81-222

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Moderate degree of congestion. Several small microcysts
Thyroid:	
No alterations observed.	Most follicles were moderate in size with occasional moderately large peripheral follicles. Follicular epithelium was cuboidal in appearance.
Heart:	
No alterations observed.	Small areas of myocardial fibrosis.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment Moderate hematogenic activity.
Liver:	
No alterations observed.	Slight congestion Minimal non-suppurative pericholangitis and bile duct proliferation.
Kidneys:	
Medulla dark red.	Moderate degree of congestion. Moderate interstitial nephritis with focal areas of interstitial fibrosis. Regenerative tubule epithelium Mononuclear cell infiltrate and dilated tubules containing proteinaceous casts.

GROUP NO. 4
Male/Rat/No. 81-222 (continued)

GROSS	MICROSCOPIC
Testes:	
Testes appeared small, soft and bluish.	Seminiferous tubules at the periphery of the testes were atrophic, however, the majority of the seminiferous tubules were essentially normal in size although reduction in spermatogenic activity was apparent.

The following organs were not altered grossly or microscopically: adrenals, stomach, small intestine, large intestine, pancreas, mesenteric lymph nodes, urinary bladder or bone marrow.

GROUP NO. 4
Male/Rat/No. 81-224

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Focal area of chromophobe hypertrophy.
Thyroids:	
Appeared slightly enlarged.	Most follicles moderate to moderately large in size and lined by cuboidal epithelium.
Adrenal glands:	
No alterations observed.	Small focal area of cortical cell hyperplasia.
Heart:	
No alterations observed.	Small area of myocardial fibrosis in the left ventricular wall.
Spleen:	
Surface appeared rough.	Moderately large amount of brown granular pigment. Slight hematogenic activity. Capsular surface of the spleen was not remarkable.
Liver:	
Dark red indentations in all lobes.	Section examined not remarkable, except for slight bile duct proliferation and slight non-suppurative pericholangitis.
Kidneys:	
Greenish tinge, medulla dark pink.	Moderately severe interstitial nephritis with rather large areas of fibrosis.

GROUP NO. 4
Male/Rat/No. 81-224 (continued)

GROSS	MICROSCOPIC
	Mononuclear cell infiltrate with regenerative tubule epithelium.
	Glomerulosclerosis and large dilated tubules containing proteinaceous casts.
Stomach:	
Walls appeared thickened.	Thickening of the walls described grossly was due to a severe inflammatory process involving muscular arteries in the submucosal tissue and in the adipose tissue adjacent to the serosa of the stomach.
	Inflammatory response was characterized by fibrinoid necrosis of vessel walls and marked perivascular inflammatory cell infiltrate and fibrosis.
Pancreas:	
Contained numerous small, firm, bluish nodules.	Severe periarteritis involving muscular arteries in the pancreas.
	Remaining pancreatic tissue was essentially normal in appearance.
Testes:	
No alterations observed.	Normal spermatogenic activity.
	Numerous muscular arteries in the testes were involved by inflammatory response with fibrinoid necrosis and perivascular inflammatory cell infiltrate.

GROUP NO. 4
Male/Rat/No. 81-224 (continued)

GROSS	MICROSCOPIC
	Typical periarteritis.
Tissue mass:	
Tissue mass located lower mid-line subcutaneous, soft, contained pockets of thick green pus.	Large subcutaneous abscess, the center of necrotic cell debris and neutrophils surrounded by fibrosis and mononuclear inflammatory cells.
	In areas, epithelial cells were present lining the abscess and the proximity.
	Histologically normal preputial glands suggests the lesion arose following occlusion of preputial gland duct.

The following organs were not altered grossly or microscopically: small intestine, large intestine, mesenteric lymph node, urinary bladder or bone marrow.

GROUP NO. 4
Male/Rat/No. 81-226

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Moderate congestion. Focal areas in which microcysts were present along with an area of chromophobe hypertrophy.
Thyroid:	
No alterations observed.	Most follicles were moderate in size lined by cuboidal epithelium. Occasional moderately large peripheral follicle.
Spleen:	
Appeared small.	Moderately large amount of pigment. Slight hematogenic activity.
Kidneys:	
Dark red zone between cortex and medulla. Medulla was dark pink.	Moderate congestion at cortico medullary junction extending into the renal papilla. Minimal interstitial nephritis with occasional small focus of regenerative tubule epithelium and mononuclear inflammatory cells.
Stomach:	
Lining appeared red.	Congestion of vessels in the lamina propria and submucosa. Sections otherwise not remarkable.
Small and large intestine:	
Appeared red.	Moderate congestion of vessels in the submucosa and lamina propria.

GROUP NO. 4
Male/Rat/No. 81-226 (continued)

GROSS	MICROSCOPIC
Testes:	
Small, soft and blue.	Sections of testes examined microscopically revealed normal spermatogenic activity.

The following organs were not altered grossly or microscopically: adrenal gland, heart, liver, pancreas, mesenteric lymph node, urinary bladder and bone marrow.

GROUP NO. 4
Male/Rat/No. 81-227

GROSS	MICROSCOPICALLY
Pituitary:	
No alterations observed.	Small chromophobe adenoma.
Thyroid:	
No alterations observed.	Follicles moderate to moderately large in size and lined by cuboidal epithelium.
Heart:	
No alterations observed.	Small focal areas of non-suppurative myocarditis and myocardial fibrosis.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment. Minimal hematogenic activity.
Liver:	
No alterations observed.	Slight non-suppurative pericholangitis.
Kidneys:	
No alterations observed.	Slight congestion at the corticomedullary junction. Rarely a dilated tubule contained proteinaceous casts.
Pancreas:	
No alterations observed.	Pancreatic tissue was histologically normal however, muscular arteries in the pancreas were undergoing early periarteritis with perivascular fibrosis and inflammatory cell infiltrate.

GROUP NO. 4
Male/Rat/No. 81-227 (continued)

GROSS	MICROSCOPIC
Mesenteric lymph node:	
No alterations observed.	The node proper was not remarkable, however, severe periarteritis present involving muscular arteries in the mesentery.
Testes:	
Left testes was small, soft and bluish.	
Right testes, contained an area which appeared enlarged, yellowish and firm.	Left testes revealed marked atrophy and lack of spermatogenic activity. Vessels revealed periarteritis. The right testes, normal spermatogenic activity was present.
Tissue mass:	
Wart like nodule was noted on the back which was firm, pinkish white and homogeneous.	Tissue mass was composed of dense mature fibrous connective tissue arranged in a whorled pattern. Diagnosis: fibroma.

The following organs were not altered grossly or microscopically: adrenal glands, stomach, small intestine, large intestine, urinary bladder or bone marrow.

GROUP NO. 4
Male/Rat/No. 81-231

GROSS	MICROSCOPIC
Pituitary:	
Dark red area on surface.	Small microcyst was present along with an area of vascular ectasia.
Thyroid:	
No alterations observed.	Most follicles moderate in size and lined by cuboidal epithelium. Occasional moderately large peripheral follicle present.
Heart:	
No alterations observed.	Areas of myocardial fibrosis in the wall of the left ventricle.
Spleen:	
Appeared enlarged.	Slight amount of brown granular pigment. Slight hematogenic activity.
Liver:	
No alterations observed.	Single small nodule of hepatocyte hypertrophy and vacuolation. Slight non-suppurative pericholangitis Minimal bile duct proliferation.
Kidneys:	
Cortex appeared wide and dark red zone at junction.	Congestion at cortico medullary junction. Slight interstitial nephritis with focal areas of interstitial fibrosis, regenerative tubule epithelium.

GROUP NO. 4
Male/Rat/No. 81-231 (continued)

GROSS	MICROSCOPIC
	Infiltration of mononuclear inflammatory cells
	Dilated tubules contained proteinaceous casts.
Testes:	
No alterations observed.	Normal spermatogenic activity.
Bone marrow:	
No alterations observed.	Majority of the hematopoietic tissue appeared to be replaced by reticuloendothelial cells.
Cervical lymph nodes	
Appeared enlarged.	Marked reticuloendothelial cell hyperplasia was present with the medullary region of the node being composed entirely of large reticulum cells.
	Moderate degree of congestion was also noted in the center of the node.

The following organs were not altered grossly or microscopically: adrenal glands, stomach, small intestine, large intestine, pancreas, mesenteric lymph nodes and urinary bladder.

GROUP NO. 4
Male/Rat/No. 81-232

GROSS		
Thyroid:		
No alterations observed.	Most follicles mod[illegible] size, lined by con[illegible]	[illegible]oderately large in [illegible]thelium.
Adrenals glands:		
No alterations observed.	Several focal areas [illegible] in the zona fasci[illegible]	[illegible]cal cell hypertrophy
Spleen:		
No alterations observed.	Slight hematogenic [illegible] Minimal amount of [illegible]	[illegible]ular pigment.
Kidneys:		
Have dark red zone between cortex and medulla.	Slight degree of con[illegible] Minimal interstitial [illegible] small focus of mon[illegible] fibrosis and regene[illegible] Rarely dilated tubule[illegible] casts were noted.	[illegible]llary congestion. [illegible]is with occasional [illegible] inflammatory cells [illegible]bule epithelium. [illegible]ined proteinaceous
Large intestine:		
No alterations observed.	Numerous cross-sec[illegible] in the lumen.	[illegible]matode parasites
Testes:		
Soft and dark blue.	Section of testes [illegible] was histologically [illegible] normal spermatoge[illegible]	[illegible]icroscopically [illegible]n appearance with [illegible]ity.

GROUP NO. 4
Male/Rat/No. 81-232 (continued)

GROSS	MICROSCOPIC
Unusual lesion:	
Ulcerated sores on both hind paws.	Lesion was a cutaneous ulcer with superficial area of necrotic debris, neutrophiles and numerous bacterial colonies with marked edema, fibrosis and vascularity in the underlying connective tissue.

The following organs were not altered grossly or microscopically: pituitary, heart, liver, stomach, small intestine, pancreas, mesenteric lymph node, urinary bladder and bone marrow.

GROUP NO. 4
Male/Rat/No. 81-233

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Small area of vascular ectasia, otherwise not remarkable.
Thyroid:	
No alterations observed.	Most follicles moderate in size lined by cuboidal epithelium. Occasional moderately large peripheral follicle.
Adrenal gland:	
Left adrenal was larger than the right and contained dark red area on surface.	Right adrenal revealed two small areas of cortical cell hypertrophy in the zona fasciculata. Left adrenal contained an area of necrosis in the medulla, apparently the result of vascular thrombosis.
Heart:	
No alterations observed.	Small area of myocardial fibrosis.
Spleen:	
No alterations observed.	Slight amount of brown granular pigment. Slight hematogenic activity.
Liver:	
No alterations observed.	Slight non-suppurative pericholangitis.

GROUP NO. 4
Male/Rat/No. 81-233 (continued)

GROSS	MICROSCOPIC
Kidneys:	
Medulla dark pink. Cut surface appeared striated, dark brown zone at junction.	Moderate congestion at corticomedullary junction.
	Slight interstitial nephritis with focal areas of interstitial fibrosis, regenerative tubule epithelium and mononuclear inflammatory cells.
Stomach:	
No alterations observed.	Small area of marked acanthosis and hyperkeratosis with small area of ulceration in the non-glandular region.
	Marked inflammatory response was present in the submucosa with large numbers of neutrophiles and fibroplasia.
Testes:	
No alterations observed.	Normal spermatogenic activity.

The following organs were not altered grossly or microscopically: small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder or bone marrow.

GROUP NO. 1
Female/Rat/No. 81-036

GROSS	MICROSCOPIC
Pituitary:	
Greatly enlarged and had dark red area on the surface.	Rather large chromophobe adenoma was present along with focal areas of chromophobe hyperplasia and rather marked vascular ectasia.
Thyroid gland:	
Right thryoid slightly enlarged.	Left thyroid was histologically normal with moderate to moderately large follicles lined by cuboidal epithelium. Right thyroid contained a large neoplasm which replaced the majority of the functional thyroid tissue and was composed of a central area of relatively well differentiated cells arranged in a somewhat tubular pattern. The peripheral areas in which the cells tended to be less well organized and differentiated. Diagnosis: thyroid carcinoma.
Adrenal glands:	
Dark red and enlarged.	Rather marked vascular ectasia was present in both adrenal glands along with diffuse hypertrophy of cells in the zone fasciculata.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment. Marked hematogenic activity.

GROUP NO. 1
Female/Rat/No. 81-036 (continued)

GROSS	MICROSCOPIC
Liver:	
Yellowish tinge.	Slight non-suppurative pericholangitis.
	Occasional vacuolated hepatocytes.
Kidneys:	
Dark red area between the cortex and medulla. Medulla dark pink and pelvis dilated.	Pelvis of both kidneys appeared to be slightly dilated.
	Slight degree of congestion was present, primarily at the corticomedullary junction.
	Slight interstitial nephritis with occasional small focus of mononuclear inflammatory cells
	Regenerative tubule epithelium and dilated tubules containing proteinaceous casts.
Urinary bladder:	
Wall appeared thickened.	Section examined was not remarkable.
Tissue Masses:	
Tissue mass #1 was located subcutaneously on the neck, firm, nodular, dark pink with yellow areas and contained dark pink fluid.	Tissue mass was mammary gland adenocarcinoma composed of sheets of epithelial cells in which moderate number of mitotic figures were present.

GROUP NO. 1
Female/Rat/No. 81-036 (continued)

GROSS	MICROSCOPIC
	In several areas differentiation of the neoplasm was present with formation of the acinar structures, and in areas large amounts of fat tissue were present.
Tissue mass #2 was located subcutaneously in the left axillary region. Soft yellowish brown in color and of tough consistency.	Mass was a mammary gland adenofibroma, composed primarily of mammary gland acinar structures along with dense collagenous tissues stroma.
Tissue mass #3 located in the right inguinal region, subcutaneous, soft purplish brown in color and of tough consistency.	Tissue mass was composed of a mixture of mammary gland acinar elements and connective tissue stroma. Diagnosis: mammary gland fibroadenoma.
Tissue mass #4 attached to the uterus at its bifurcation. Tissue was firm, pale pink and homogeneous.	Tissue mass was composed of dense mature fibrous connective tissue and was relatively vascular. Diagnosis: fibroma

GROUP NO. 1
Female/Rat/No. 81-036 (continued)

GROSS	MICROSCOPIC
Cervical lymph nodes:	
Appeared enlarged.	Marked reticuloendothelial cell hyperplasia was present with the medullary region of the node being composed entirely of primitive reticulum cells.

The following organs were not altered grossly or microscopically: heart, stomach, small intestine, large intestine, pancreas, mesenteric lymph nodes, ovary and bone marrow.

GROUP NO. 1
Female/Rat/No. 81-037

GROSS	MICROSCOPIC
Pituitary:	
Greatly enlarged, dark red nodular	Large chromophobe adenoma present with marked vascular ectasia.
Thyroid:	
No alterations observed.	Most follicles moderate in size and lined by cuboidal epithelium.
	Occasional moderately large peripheral follicle.
Adrenal glands:	
Speckled and enlarged.	Large focal areas of cortical cell hypertrophy with vacuolar degeneration and vascular ectasia.
Spleen:	
No alterations observed.	Moderately large amount of brown granular pigment.
	Minimal hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis.
Kidneys:	
No alterations observed.	Slight congestion at the corticomedullary junction.
Stomach:	
Pyloric region appeared red.	Not remarkable except for slight congestion of submucosal vessels.
Ovary:	
No alterations observed.	Ovary proper was not remarkable, however, salpingitis was present in the adjacent fallopian tube with neutrophiles present

GROUP NO. 1
Female/Rat/No. 81-037 (continued)

GROSS	MICROSCOPIC
	in the lumen and mononuclear inflammatory cells in the submucosal tissue.
Tissue mass:	
Located in the right inguinal region, subcutaneous, firm nodular, purplish-pink with pockets of thick yellow material.	Tissue mass was fibroadenoma composed of acinar structures filled with secretion, surrounded by dense mature fibrous connective tissue stroma.

The following organs were not altered grossly or microscopically: heart, small intestine, large intestine, pancreas, mesenteric lymph nodes, urinary bladder, or bone marrow.

GROUP NO. 1
Female/Rat/No. 81-053

GROSS	MICROSCOPIC
Pituitary:	
Dark red and enlarged.	Large chromophobe adenoma present along with marked vascular ectasia.
Thyroid gland:	
No alterations observed.	Most follicles moderate to moderately large in size and lined by cuboidal epithelium.
Adrenal glands:	
Right adrenal was dark red in color.	Large areas of cortical cell hypertrophy with severe vacuolar degeneration and vascular ectasia.
Spleen:	
No alterations observed.	Small amount of brown granular pigment. Moderate hematogenic activity. Reticuloendothelial cells were diffusely scattered throughout the red pulp of the spleen.
Liver:	
Median lobe contained a soft nodule on the parietal surface measuring 0.7 x 1.0 cm. and dark red in color.	Lesion described grossly was a rather large circumscribed area of hepatocyte degeneration surrounded by a hemorrhagic border. The lesion apparently arose as a result of trauma incurred at time of euthanasia.

GROUP NO. 1
Female/Rat/No. 81-053 (continued)

GROSS	MICROSCOPIC
	The remainder of the liver section revealed only minimal non-suppurative pericholangitis and minimal bile duct proliferation.
Kidney:	
Medulla was wide and white.	Kidney sections were not remarkable, except for slight apparent hypertrophy of renal tubule epithelium.
Tissue mass:	
Subcutaneous in the right flank contained brownish-yellow fluid and of soft consistency.	Tissue mass was a large mammary gland carcinoma. In areas the cells arranged in somewhat papillary pattern, where in other areas large cystic spaces were filled with secretion.

The following organs were not altered gorssly or microscopically: heart, stomach, small intestine, large intestine, pancreas, mesenteric lymph nodes,urinary bladder, ovary or bone marrow.

GROUP NO. 1
Female/Rat/No. 81-055

GROSS	MICROSCOPIC
Pituitary:	
Enlarged and dark red in color.	Large chromophobe adenoma present with marked vascular ectasia.
Thyroid:	
Appeared slightly enlarged.	Most follicles were moderate in size and lined by cuboidal epithelium with occasional moderately large peripheral follicles.
Adrenal glands:	
Speckled and enlarged.	Rather large areas of vascular ectasia. Focal areas of cortical cell hypertrophy with early vacuolar degeneration.
Heart:	
No alterations observed.	Small area of myocardial fibrosis.
Spleen:	
No alterations observed.	Moderately large amount of brown granular pigment. Minimal hematogenic activity.
Kidneys:	
No alterations observed.	Minimal interstitial nephritis with small focus of regenerative tubule epithelium and occasional dilated tubules containing proteinaceous casts.

GROUP NO. 1
Female/Rat/No. 81-055 (continued)

GROSS	MICROSCOPIC
Ovary:	
Right ovary surrounded by watery cyst.	Sections examined were not remarkable.
Tissue mass:	
Located on the throat, subcutaneous, firm, nodular purplish-pink.	Mammary gland fibroadenoma. Composed primarily of dense mature fibrous connective tissue in which occasional mammary gland acinar structures were noted.

The following organs were not altered grossly or microscopically: liver, stomach, small intestine, large intestine, pancreas, mesenteric lymph nodes, urinary bladder, or bone marrow.

GROUP NO. 1
Female/Rat/No. 81-056

GROSS	MICROSCOPIC
Pituitary:	
Had a clear watery cyst on surface.	Small cystic space present along with chromophobe hyperplasia.
Thyroid:	
No alterations observed	Most follicles moderate to moderately large in size and lined by cuboidal epithelium.
Adrenal glands:	
Speckled and enlarged.	Large areas of cortical cell hypertrophy in which marked vacuolar degeneration and vascular ectasia were present.
Heart:	
No alterations observed.	Area of myocardial fibrosis.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment and phagocytic cells Moderate hematogenic activity.
Liver:	
No alterations observed.	Minimal bile duct proliferation with slight degree of congestion
Kidney:	
Medulla dark pink.	Congestion at corticomedullary junction, otherwise not remarkable.

GROUP NO. 1
Female/Rat/No. 81-056 (continued)

GROSS	MICROSCOPIC
Ovary:	
No alterations observed.	Section missing.
Tissue mass:	
Tissue mass #1 in the right axilla, subcutaneous, purplish pink in color, tough and vascular.	Mammary gland fibroadenoma, composed primarily of dense mature fibrous connective tissue in which occasional scattered mammary gland acinar structures were present.
Tissue mass #2 in the left inguinal region, subcutaneous soft purplish pink, and of tough consistency.	Tissue was similar to tissue mass #1, composed of dense mature fibrous connective tissue with mammary gland acinar structures. Diagnosis: mammary gland fibroadenoma. Small amount of histologically normal mammary gland tissue was present adjacent to the neoplasm.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder or bone marrow.

GROUP NO. 1
Female/Rat/No. 81-060

GROSS	MICROSCOPIC
Pituitary:	
No alterations observed.	Tissue not remarkable except for slight vascular ectasia and small focal area of chromophobe hypertrophy.
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in size and lined by cuboidal epithelium. The single small area of hyperplasia was present at the periphery of the thyroid.
Adrenal gland:	
Speckled and enlarged.	Large areas of cortical cell hypertrophy with vacuolar degeneration and vascular ectasia.
Heart:	
No alterations observed.	Small area of myocardial fibrosis.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment Moderate hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis and minimal bile duct proliferation.
Kidneys:	
No alterations observed.	Slight congestion at cortical medullary junction. Artifactual distortion primarily involving the convoluted tubules.

GROUP NO. 1
Female/Rat/No. 81-060 (continued)

GROSS	MICROSCOPIC
Mesenteric lymph nodes:	
No alterations observed.	Moderate congestion.
Ovaries:	
Both ovaries were involved in watery cysts.	Cystic structures were not evident, however, salpingitis was present with severe necrotizing reaction and massive infiltration of neutrophiles and macrophages.
Unusual lesions:	
Uterus:	
Uterine horn contained many nodules.	Cystic endometrial hyperplasia was present with numerous markedly dilated endometrial glands along with focal areas of metritis in which large numbers of neutrophiles were present in the cystic endometrial gland structures.
Tissue masses:	
Tissue mass #1 on the throat, soft subcutaneous, purplish and of rough consistency.	Well circumscribed mammary gland fibroadenoma composed of a mixture of mammary gland acinar structure and dense mature fibrous connective tissue.

GROUP NO. 1
Female/Rat/No. 81-060 (continued)

GROSS	MICROSCOPIC
Tissue mass #2 located in left inguinal region, soft yellow, brownish and contained brown material.	Lesion appeared to be a large galactocele apparently arising as a markedly dilated mammary gland acinar structure with subsequent infiltration of large numbers of macrophages.
Tissue mass #3 located in the left axillary region, soft yellowish-pink in color with thick yellow material.	Tissue section examined revealed numerous dilated mammary gland acinar structures filled with eosinophilic secretion and surrounded by chronic inflammatory response and early fibrosis. Apparently lesion arose as galactocele with inflammatory response to the milk protein.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, urinary bladder, or bone marrow.

GROUP NO. 1
Female/Rat/No. 81-064

GROSS	MICROSCOPIC
Pituitary:	
Enlarged and dark red area on surface.	Small area of chromophobe hyperplasia and rather focal area of vascular ectasia
Thyroid gland:	
No alterations observed.	Most follicles were moderate to moderately large in size and lined by cuboidal epithelium.
Adrenal gland:	
No alterations observed.	Large areas of cortical cell hypertrophy with vacuolar degeneration and vascular ectasia. Large area of apparent thrombosis in the medullary region of the adrenal.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment Modera tely large amount of hematogenic activity.
Liver:	
No alterations observed.	Minimal bile duct proliferation.
Kidney:	
No alterations observed.	Slight interstitial nephritis with focal accumulation of mononuclear inflammatory cells, regenerative tubule epithelium Occasional dilated tubules containing proteinaceous casts.

GROUP NO. 1
Female/Rat/No. 81-064 (continued)

GROSS	MICROSCOPIC
Stomach:	
No alterations observed.	Single small focal area of gastritis with infiltration of neutrophiles and focal necrosis in the mucosa.
Ovary:	
Watery cyst surrounding the left ovary.	Microscopic of both ovaries was not remarkable.
Tissue masses:	
Tissue mass #1 covering the entire anal area, subcutaneous firm, nodular, purplish-pink with large pockets containing thick tan fluid and very dark red fluid.	Mammary gland fibroadenoma composed of dense mature fibrous connective tissue stroma with scattered acinar structures.
Tissue mass #2, located in right axilla, subcutaneous, firm nodular, purplish-pink with pockets of thick yellow material.	Mass was fibroadenoma composed of an admixture of mammary gland acinar structures with dense mature fibrous connective tissues stroma.

GROUP NO. 1
Female/Rat/No. 81-064 (continued)

GROSS	MICROSCOPIC
Tissue mass #3 located on left axilla, same gross appearance as tissue mass #2.	Tissue mass was composed of relatively well differentiated mammary gland epithelial cells arranged in a papillary pattern along with large open spaces containing eosinophilic secretion. Few mitotic figures were noted, however, in some areas the cells were arranged in almost continuous sheet-like pattern. Diagnosis: low-grade mammary carcinoma.
Uterus: There is an unusual lesion in uterus, contains several small cyst-like areas.	Rather pronounced cystic endometrial hyperplasia.

The following organs were not altered grossly or microscopically: heart, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder, or bone marrow.

GROUP NO. 1
Female/Rat/No. 81-066

GROSS	MICROSCOPIC
Pituitary:	
Greatly enlarged, dark red in color.	A rather large chromophobe adenoma was present, along with focal areas of chromophobe hyperplasia with rather diffuse vascular ectasia.
Thyroid:	
No alterations observed.	Most follicles were moderate in size and lined by cuboidal epithelium although a few moderately large peripheral follicles were present.
Adrenal glands:	
Speckled and enlarged.	Large areas of cortical cell hypertrophy with vacuolar degeneration and vascular ectasia. Large thrombi were present in the area of vacuolar degeneration.
Spleen:	
No alterations observed.	Large amount of brown granular pigment Minimal hematogenic activity.
Liver:	
Light yellow areas on all lobes.	Areas of subcapsular fibrosis and bile duct proliferation were noted. Slight degree of bile duct proliferation was present throughout the section.

GROUP NO. 1
Female/Rat/No. 81-066 (continued)

GROSS	MICROSCOPIC
Kidneys:	
Dark brown zone between cortex and medulla.	Not remarkable, except for slight congestion at the corticomedullary junction.
Stomach:	
Lining appeared red	Slight congestion of submucosal vessels, otherwise, not remarkable.
Ovaries:	
Right ovary involved in a watery cyst.	Large follicular cyst was present in one ovary.
Tissue mass:	
Tissue mass #1 on left side of neck, subcutaneous, firm, of tough consistency, vascular, and purplish pink.	Rather extensive mammary gland fibroadenoma composed of variable quantities of mammary gland acinar structures and dense mature fibrous connective tissues.
Tissue mass #2, in the lower midline, subcutaneous, firm nodular, purplish pink in color.	Similar in appearance to tissue mass #1, composed of mammary gland acinar structures and a dense mature fibrous connective tissues stroma. Diagnosis: mammary gland fibroadenoma

GROUP NO. 1
Female/Rat/No. 81-066 (continued)

GROSS	MICROSCOPIC

The following organs were not altered grossly or microscopically: heart, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder and bone marrow.

GROUP NO. 1
Female/Rat/No. 81-068

GROSS	MICROSCOPIC
Pituitary:	
Small raised cyst like area on surface.	Cyst like area not apparent on section examined. Slight degree of vascular ectasia was noted.
Thyroid:	
Slightly enlarged	Most follicles moderate to moderately large in size and lined by cuboidal epithelium.
Adrenal glands:	
Speckled. Right adrenal was enlarged with dark red area on surface.	Lesion noted on right adrenal was a large area of cortical cell hypertrophy with marked vascular ectasia and vacuolar degeneration. Similar smaller areas of cortical cell hypertrophy were noted in the left adrenal.
Heart:	
No alterations observed.	Several diffuse areas of myocardial fibrosis.
Spleen:	
No alterations observed.	Large amount of brown granular pigment Moderate hematogenic activity.
Liver:	
No alterations observed.	Slight non-suppurative pericholangitis.

GROUP NO. 1
Female/Rat/No. 81-068 (continued)

GROSS	MICROSCOPIC
Kidneys:	
Dark brown zone at junction.	Congestion at the cortical medullary junction rarely a dilated tubule containing proteinaceous material.
Pancreas:	
No alterations observed.	Pancreatic tissue proper was not remarkable, however, a small focal area of fibrosis and mononuclear cell infiltrate was present in the connective tissue of the pancreas. Possibly representing periarteritis.
Mesenteric lymph node:	
No alterations observed.	Section was missing, as only mesenteric blood vessels and connective tissue were present.
Ovary:	
Left ovary involved in a large watery cyst.	A large follicular cyst was present at the periphery of the ovary. Salpingitis was also present with large amounts of purulent exudate in the fallopian tubes.

GROUP NO. 1
Female/Rat/No. 81-068 (continued)

GROSS	MICROSCOPIC
Tissue mass:	
Tissue mass #1 located in the right flank, subcutaneous, firm, nodular, yellowish-white and containing pockets of thick yellow material.	Tissue mass was a mammary gland fibroadenoma composed primarily of mammary gland acinar structures, several of which were markedly distended and contained eosinophilic secretion.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, urinary bladder or bone marrow.

GROUP NO. 1
Female/Rat/No. 81-072

GROSS	MICROSCOPIC
Pituitary:	
Enlarged, brownish-gray and nodular.	Chromophobe adenoma was present in which moderate degree of vascular ectasia was present.
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in size and lined by cuboidal epithelium.
Adrenal glands:	
Speckled	Large focal areas of cortical cell hypertrophy with vacuolar degeneration and vascular ectasia.
Heart:	
No alterations observed.	Small area of myocardial fibrosis.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment Moderately large amount of hematogenic activity.
Liver:	
Numerous yellow areas on the surface, and margins were rounded.	Occasional area of hepatocyte hypertrophy with increased cytoplasmic vacuolation.

GROUP NO. 1
Female/Rat/No. 81-072 (continued)

GROSS	MICROSCOPIC
Kidneys:	
No alterations observed.	Slight congestion at the cortical medullary junction.
	Focal mineralization and hyperplasia of renal pelvic epithelium.
Unusual lesions:	
Tissue mass #1 located in the right axilla, subcutaneous, firm, nodule, purplish-pink	Mammary gland fibroadenoma, composed of dense mature fibrous connective tissue in which moderate numbers of mammary gland acinar structures were present.
Tissue mass #2 located in the left inguinal region, subcutaneous, firm, nodular, purplish-pink and contained pockets of thick yellow material.	Mammary gland fibroadenoma, in which several of the mammary gland acinar structures were markedly dilated and contained large amount of eosinophilic secretion.

GROUP NO. 1
Female/Rat/No. 81-072 (continued)

GROSS	MICROSCOPIC
Tissue mass #3 located in the anal area, subcutaneous, firm, homogenous, light tan.	Tissue mass was composed of two histologically different appearing areas. In one area, mammary gland acinar structures were present in which large amount of homogenous eosinophilic staining secretion was present, giving the appearance of histologically normal actively secreting mammary tissue. Adjacent to this tissue, however, was a large nodule, in which the cells were less well differentiated, with larger nuclei, marked piling up of cells and scattered mitotic figures. Diagnosis: mammary gland adenocarcinoma.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, mesenteric lymph nodes, urinary bladder, ovary or bone marrow.

GROUP NO. 2
Female/Rat/No. 81-130

GROSS	MICROSCOPIC
Liver:	
Dark red indentations on all lobes.	Minimal bile duct proliferation. Slight degree of congestion.
Kidneys:	
No alterations observed.	Minimal degree of congestion at the cortical medullary junction.

GROUP NO. 2
Female/Rat/No. 81-132

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Slight congestion
	Rather large area of hepatocyte hypertrophy and vacuolation.
Kidneys:	
Dark red zone between cortex and medulla. Medulla was dark pink. Yellow area on one kidney on the outside surface.	
	Congestion primarily at the cortical medullary junction.
	Artifactual distortion of convoluted tubules.
Tissue mass #1 in the right axilla, subcutaneous, soft purplish brown in color and of tough consistency.	
	Tissue mass was a mammary gland fibroadenoma in which several of the acinar structures were markedly dilated and contained globular eosinophilic staining secretion.
Tissue mass #2 in the left axilla, subcutaneous, soft, purplish brown in color and of tough consistency. Thick yellow material was present.	
	Tissue mass was mammary gland fibroadenoma, similar in appearance to tissue mass #1

GROUP NO. 2
Female/Rat/No. 81-132 (continued)

GROSS	MICROSCOPIC
	in that large extended acinar structures contained eosinophilic homogeneous secretion.

GROUP NO. 2
Female/Rat/No. 81-134

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Not remarkable.
Kidneys:	
Dark red zone between cortex and medulla	Slight congestion extending from renal cortex to the renal medulla, otherwise not remarkable.
Unusual lesion:	
Active mammary gland tissue was noted in the right axilla.	Section of mammary gland tissue examined microscopically was within normal histologic limits.
Uterus:	
A yellow firm nodule was noted measuring 0.5 x 0.5 cm in the cervix.	A small endometrial polyp was present along with mucoid metaplasia of the epithelium lining the cervix.

GROUP NO. 2
Female/Rat/No. 81-138

GROSS	MICROSCOPIC
Liver:	
Small, dark red indentations on all lobes.	Slight non-suppurative pericholangitis.
Kidneys:	
No alterations observed.	Single small focus of dilated tubules contained proteinaceous casts, otherwise not remarkable.
Tissue Mass:	
Located in the left inguinal region, subcutaneous, nodular, vascular, yellowish-pink and firm.	Tissue mass was mammary gland fibroadenoma composed of normal appearing mammary gland acinar structures and dense mature fibrous connective tissue stroma.
Unusual lesions:	
Active mammary gland tissue was noted in each inguinal region.	Tissue was composed of a mixture of non-secreting and actively secreting mammary gland acinar structures and occasional ducts.
Uterus:	
Grossly uterine horn was thickened with a firm red nodule in the cervix.	Endometrial polyp was present in which the surface was ulcerated.

GROUP NO. 2
Female/Rat/No. 81-138 (continued)

GROSS	MICROSCOPIC
	Areas of hemorrhage and neutrophile infiltration.

GROUP NO. 2
Female/Rat/No. 81-141

GROSS	MICROSCOPIC
Liver:	
Enlarged and margins rounded.	Slight congestion Occasional focal area of hepatocyte hypertrophy.
Kidneys:	
Narrow cortex	Minimal interstitial nephritis with a rare small focus of regenerative tubule epithelium Dilated tubules contained proteinaceous casts and a few mononuclear inflammatory cells.
Tissue mass:	
Located in the inguinal region, bilateral, and in the anal region, subcutaneous, of tough consistency, pink with dark purple areas.	Tissue mass examined was mammary gland fibroadenoma, composed of essentially equal amounts of mammary gland acinar structures and dense mature fibrous connective tissue stroma.

GROUP NO. 3
Female/Rat/No. 81-186

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Slight degree of congestion, otherwise not remarkable.
Kidneys:	
Dark red zone between cortex and medulla.	Moderate congestion at the cortico medullary junction, otherwise not remarkable.
Tissue mass:	
Located in the right flank, subcutaneous, firm, nodular purplish pink in color and of tough consistency.	Mammary gland fibroadenoma, composed primarily of dense mature fibrous connective tissue in which scattered mammary gland acinar structures were present.

GROUP NO. 3
Female/Rat/No. 81-191

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Slight non-suppurative pericholangitis.
	Slight bile duct proliferation.
Kidneys:	
Dark red zone between cortex and medulla.	Slight congestion, rarely a dilated tubule containing proteinaceous material.

GROUP NO. 3
Female/Rat/No. 81-199

GROSS	MICROSCOPIC
Liver:	
Light tan in color	Vacuolated hepatocytes diffusely scattered throughout the section.
	Minimal non-suppurative pericholangitis
	Slight bile duct proliferation
Kidneys:	
Dark red zone between cortex and medulla.	Slight congestion, otherwise not remarkable.
Tissue mass:	
Wart like nodule was noted on the back. Tissue was light brown and firm.	Tissue described grossly was composed of a confluence of several epidermal inclusion cysts.
	Structures were filled with keratonaceous debris and lined by stratified squamous epithelium.

GROUP NO. 3
Female/Rat/No. 81-201

GROSS	MICRSOCOPIC
Liver:	
No alterations observed.	Slight non-suppurative pericholangitis Slight bile duct proliferation.
Kidneys:	
No alterations observed.	Minimal interstitial nephritis Occasional small focus of mononuclear inflammatory cells. Regenerative tubule epithelium and dilated tubules containing proteinaceous casts.

GROUP NO. 3
Female/Rat/No. 81-202

GROSS	MICROSCOPIC
Liver:	
No alterations observed.	Slight congestion, otherwise not remarkable.
Kidneys:	
No alterations observed.	Minimal interstitial nephritis with a rare small focus of mononuclear inflammatory cells. Regenerative tubule epithelium and dilated tubules containing proteinaceous casts.
Tissue mass:	
Nodule was present on the throat, subcutaneous, nodular, yellowish-white.	Mammary gland fibroadenoma composed of an admixture of mammary gland acinar structures and dense mature fibrous connective tissue stroma.

GROUP NO. 4
Female/Rat/No. 81-246

GROSS	MICROSCOPIC
Pituitary:	
Appeared enlarged and dark red areas on surface.	Single microcyst was present along with a small focal area of chromophobe hypertrophy and rather diffuse vascular ectasia.
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in size, lined by cuboidal epithelium.
Adrenal gland:	
No alterations observed.	Single large area of cortical cell hypertrophy in the zona fasciculata, along with slight vascular ectasia.
Spleen:	
No alterations observed.	Large amount of brown granular pigment Slight hematogenic activity.
Liver:	
Dark red indentations in all lobes.	Not remarkable, except for slight degree of congestion.
Ovary:	
Right ovary surrounded by a watery cyst.	One of the ovaries surrounded by large open cystic space. Sections were otherwise, not remarkable.

GROUP NO. 4
Female/Rat/No. 81-246 (continued)

GROSS	MICROSCOPIC
Mammary tissue:	
Active mammary tissue was noted in the lower midline.	Numerous distended mammary gland acinar structure were present filled with eosinophilic secretion.

The following organs were not altered grossly or microscopically: heart, kidney, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder, or bone marrow.

GROUP NO. 4
Female/Rat/No. 81-247

GROSS	MICROSCOPIC
Pituitary:	
Enlarged with dark red area on surface.	Focal area of chromophobe hypertrophy along with diffuse vascular ectasia.
Thyroid:	
No alterations observed.	Section was missing.
Adrenal gland:	
Speckled and appeared enlarged.	Large confluent areas of vascular ectasia with apparent thrombosis.
Heart:	
No alterations observed.	Single area of myocardial fibrosis.
Spleen:	
No alterations observed	Large amount of brown granular pigment Slight hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis.
Kidney:	
Cortex white, medulla gray in color.	Sections examined were not remarkable, except for slight congestion at the cortical medullary junction.

GROUP NO. 4
Female/Rat/No. 81-247 (continued)

GROSS	MICROSCOPIC
Ovary:	
Right ovary was involved in a watery cyst.	Sections examined were histologically normal except for slight salpingitis.
Unusual lesions:	
Tissue mass #1, in the right axilla, subcutaneous, firm, nodular and tough. Filled with yellowish-red material.	Tissue mass was mammary gland fibroadenoma, in which several of the acinar structures were marked distended with eosinophilic staining secretion.
Tissue mass #2, in the left axilla, subcutaneous, soft, purplish-pink and tough in consistency.	Tissue mass was mammary gland adenofibroma, composed primarily of histologically normal appearing mammary gland acinar structures, and a dense mature fibrous connective tissue stroma.

The following organs were not altered grossly or microscopically: stomach, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder, or bone marrow.

GROUP NO. 4
Female/Rat/No. 81-248

GROSS	MICROSCOPIC
Pituitary:	
Enlarged and dark red.	Large chromophobe adenoma with diffuse vascular ectasia.
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in size, and lined with cuboidal epithelium.
Adrenal glands:	
Speckled	Very extensive areas of cortical cell hypertrophy with vacuolar degeneration and vascular ectasia.
	Section of the opposite adrenal was within normal histological limits.
Spleen:	
No alterations observed.	Large amount of brown granular pigment.
	Moderate hematogenic activity.
Liver:	
Yellowish tinge and dark red indentations in all lobes.	Minimal non-suppurative pericholangitis.
	Minimal bile duct proliferation.
	Slight congestion.
Kidneys:	
Dark brown zone at junction	Congestion at the cortical medullary junction, otherwise, not remarkable.

GROUP NO. 4
Female/Rat/No. 81-248 (continued)

GROSS	MICROSCOPIC
Ovary:	
Right ovary involved in a large watery cyst.	Large fluid filled parovarian cyst present, surrounding the right ovary.
	Left ovary, histologically normal.

The following organs were not altered grossly or microscopically: heart, somach, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder or bone marrow.

GROUP NO. 4
Female/Rat/No. 81-250

GROSS	MICROSCOPIC
Pituitary:	
Dark red area on surface.	Section examined was not remarkable.
Thyroid:	
No alterations observed.	Most follicles were moderate in size, and lined by cuboidal epithelium. Occasional moderately large peripheral follicles.
Spleen:	
No alterations observed.	Moderately large amount of brown granular pigment. Slight hematogenic activity.
Liver:	
No alterations observed.	Minimal bile duct proliferation. Minimal non-suppurative pericholangitis.
Kidneys:	
Dark red zone at junction	Slight congestion. Rarely a dilated tubule containing proteinaceous material.
Uterus:	
Small yellow nodule 0.2 x 0.5 cm in the right uterine horn.	Rather severe suppurative endometritis was present with large numbers of neutrophiles in the distended endometrial glands and resultant hyperplasia of the uterine mucosa.

GROUP NO. 4
Female/Rat/No. 81-250 (continued)

GROSS	MICROSCOPIC

The following organs were not altered grossly or microscopically: adrenal, heart, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder, ovary, or bone marrow.

GROUP NO. 4
Female/Rat/No. 81-253

GROSS	MICROSCOPIC
Pituitary:	
Enlarged and dark red in color.	Large chromophobe adenoma with rather marked vascular ectasia.
Thyroid:	
No alterations observed.	Follicles were moderate to moderately large in size, lined by cuboidal epithelium. Moderate amount of parafollicular tissue present.
Adrenal:	
No alterations observed.	Focal areas of cortical cell hypertrophy in the zona fasciculata.
Spleen:	
Covered with fat-like tissue.	Small amount of adipose tissue was present on the capsular surface of the spleen. Large amount of brown granular pigment was present. Slight hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis. Occasional vacuolated hepatocytes.
Kidneys:	
Dark red zone between cortex and medulla.	Moderate congestion at the cortico medullary junction. Small amount of brown granular pigment in convoluted tubule epithelium.

GROUP NO. 4
Female/Rat/No. 81-253 (continued)

GROSS	MICROSCOPIC
Stomach:	
Lining appeared red.	Sections examined not remarkable.
Mesenteric lymph node:	
No alterations observed.	Small amount of brown granular pigment in phagocytic cells.
Ovary:	
Left ovary involved in a large watery cyst. Ovary had abscessed areas on it.	Ovarian tissue proper was not remarkable, however, severe suppurative necrotizing salpingitis was present with large amounts of exudate in the fallopian tubes. A small follicular cyst was present in the opposite ovary.

The following organs were not altered grossly or microscopically: heart, small intestine, large intestine, pancreas, urinary bladder, or bone marrow.

GROUP NO. 4
Female/Rat/No. 81-258

GROSS	MICROSCOPIC
Pituitary:	
Greatly enlarged, nodular and grayish-white in color.	Large chromophobe adenoma was present with marked vascular ectasia. Several areas were present in which marked vacuolation and chromophobe hypertrophy were noted.
Thyroid:	
No alterations observed.	Most follicles moderate in size, lined by cuboidal epithelium. Occasional moderately large peripheral follicle.
Adrenal gland:	
Speckled and enlarged.	Focal areas of cortical cell hypertrophy. Severe vascular ectasia with coalescence of vascular spaces to form large blood filled cystic areas.
Spleen:	
No. alterations observed.	Large amount of brown granular pigment. Slight hematogenic activity.
Kidneys:	
Dark red area between cortex and medulla.	Slight congestion at cortico medullary junction, otherwise not remarkable.

GROUP NO. 4
Female/Rat/No. 81-258 (continued)

GROSS	MICROSCOPIC
Stomach:	
Lining contained small sore like area.	Sections examined microscopically were not remarkable.
Ovary:	
No alterations observed.	Section was missing.
Unusual lesions:	
Tissue mass, in the right axilla, subcutaneous, soft, nodular, brownish-pink in color and filled with pockets of thick yellow material.	Tissue mass was mammary gland adenofibroma in which many acinar structures were distended with eosinophilic globular secretion. The acinar components were surrounded by dense mature fibrous connective tissue.

The following organs were not altered grossly or microscopically: heart, liver, small intestine, large intestine, pancreas, mesenteric lymph nodes, urinary bladder, or bone marrow.

GROUP NO. 4
Female/Rat/No. 81-260

GROSS	MICROSCOPIC
Pituitary:	
Contained a dark red area on surface.	A solitary microcyst was present in one section of pituitary, also a small well circumscribed chromophobe adenoma was present along with marked vascular ectasia.
Thyroid:	
No alterations observed.	Most follicles moderate to moderately large in sized and lined by cuboidal epithelium.
Adrenal glands:	
Speckled	Sections examined were within normal histologic limits.
Spleen:	
No alterations observed.	Small amount of brown granular pigment Moderately large amount of hematogenic activity
Liver:	
No alterations observed.	Occasional small focus of extramedullary hematopoiesis. Slight non-suppurative pericholangitis and slight bile duct proliferation.
Unusual lesion:	
Tissue mass, was firm, located in the cervix and protruded from the vagina. Mass was grayish-pink in color, 4.0 x 1.0 cm in diam.	Tissue was a mammary gland adenofibroma,

GROUP NO. 4
Female/Rat/No. 81-260 (continued)

GROSS	MICROSCOPIC
	composed of histologically normal appearing mammary gland acinar structures, in a dense mature fibrous connective tissue stroma. Neoplasm was located adjacent to the wall of the vagina.
Tissue mass #2 was fatty appearing tissue, taken from the anal region.	Tissue mass was composed of very immature appearing fibrous connective tissues in which the cells contained large, vesicular nuclei. In many areas the large immature appearing cells appeared to be arranged in a circumscribed pattern around the numerous vascular channels in the tissue mass giving the appearance of a hemangiopericytoma. The surface of the tissue was ulcerated resulting in severe edema, hemorrhage and inflammatory cell infiltrate in the superficial portions.

The following organs were not altered grossly or microscopically: heart, kidney, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, urinary bladder, ovary, or bone marrow.

GROUP NO. 4
Female/Rat/No. 81-261

GROSS	MICROSCOPIC
Pituitary:	
Appeared slightly enlarged and irregular in shape.	Several small microcysts were present along with focal areas of chromophobe hyperplasia.
Thyroid:	
No alterations observed.	Most follicles were moderately large in size and lined by flattened to cuboidal epithelium.
Adrenal gland:	
No alterations observed	Small amount of vascular ectasia in the inner cortical region, otherwise not remarkable.
Spleen:	
No alterations observed	Moderate amount of brown granular pigment Moderate hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis.
Kidneys:	
Dark brown zone between cortex and medulla.	Minimal interstitial nephritis Occasional small focus of regenerative tubule epithelium, mononuclear inflammatory cells and interstitial fibrosis and dilated tubules containing proteinaceous casts. Slight congestion was also noted.

The following organs were not altered grossly or microscopically: heart, stomach, small intestine, large intestine, pancreas, mesenteric lymph nodes, urinary bladder, ovary and bone marrow.

GROUP NO. 4
Female/Rat/No. 81-262

GROSS	MICROSCOPIC
Pituitary:	
Greatly enlarged, irregular in shape and dark in color.	Large chromophobe adenoma in which rather marked vascular ectasia was present.
Thyroid:	
No alterations observed.	Most follicles were moderate to moderately large in size, lined by cuboidal epithelium.
Adrenal glands:	
Dark red and speckled	Large areas of cortical cell hypertrophy with vacuolar degeneration and vascular ectasia.
Spleen:	
No alterations observed.	Moderate amount of brown granular pigment. Marked hematogenic activity.
Liver:	
Nutmeg in color with red indentations.	Slight congestion and occasional vacuolated hepatocytes.
Kidneys:	
Medulla dark pink	Slight congestion at cortico medullary junction, otherwise, not remarkable.
Stomach:	
No alterations observed.	Focal area of marked acanthosis and hyperkeratosis with infiltrates of neutrophiles and mononuclear inflammatory cells in the submucosa.

GROUP NO. 4
Female/Rat/No. 81-262 (continued)

GROSS	MICROSCOPIC
Ovary:	
Right ovary was involved in a watery cyst.	Large parovarian cyst.
	Left ovary histologically normal.

The following organs were not altered grossly or microscopically: heart, small intestine, large intestine, pancreas, mesenteric lymph nodes, urinary bladder and bone marrow.

GROUP NO. 4
Female/Rat/No. 81-264

GROSS	MICROSCOPIC
Pituitary:	
Small cyst like area on the surface.	Small focus of chromophobe hypertrophy, otherwise not remarkable.
Thyroid:	
No alterations observed.	Most follicles were moderate in size, lined by flattened to cuboidal epithelium. Occasional moderately large peripheral follicle.
Adrenal:	
Dark brown and speckled	Slight degree of vascular ectasia in the cortex. Slight diffuse cortical cell hypertrophy.
Spleen:	
No alterations observed.	Moderately large amount of brown granular pigment. Minimal hematogenic activity.
Liver:	
No alterations observed.	Minimal non-suppurative pericholangitis
Kidneys:	
No alterations observed.	Moderate congestion at the cortical medullary junction. Occasional dilated tubules containing proteinaceous casts and small amount of regenerative tubule epithelium and constituting minimal interstitial nephritis.

GROUP NO. 4
Female/Rat/No. 81-264 (continued)

GROSS	MICROSCOPIC
	Small amount of brown granular pigment was noted in proximal convoluted tubule epithelium.
Pancreas:	
No alterations observed.	Perivascular inflammatory response involving muscular arteries in the parapancreatic tissue.
Ovary:	
Right ovary involved in a small watery cyst.	Section was not remarkable.

The following organs were not altered grossly or microscopically: heart, stomach, small intestine, large intestine, mesenteric lymph nodes, urinary bladder and bone marrow.

104-WEEK DIETARY ADMINISTRATION - DOGS

X-5120

FINAL REPORT

Submitted to

Specialty Chemicals Division
Allied Chemical Corporation
Buffalo, New York

TRW/HAZLETON LABORATORIES
9300 LEESBURG TURNPIKE • VIENNA, VIRGINIA • 22180

October 15, 1971

TRW
HAZLETON LABORATORIES

SPONSOR: Specialty Chemicals Division
Allied Chemical Corporation

DATE: October 15, 1971

MATERIAL: X-5120

SUBJECT: FINAL REPORT
104-Week Dietary Administration - Dogs
Project No. 165-129

SUMMARY

X-5120 was evaluated for chronic oral toxicity by dietary administration to three groups of dogs at levels of 500, 5000, and 50,000 ppm daily for two years. A fourth group of dogs served as a control and received basal laboratory diet only.

Test dogs generally appeared normal and similar to control dogs with respect to appearance, behavior, appetite, and elimination.

No compound-related effects upon blood chemistry, urine analysis, or hematology were observed.

Gross pathology revealed no alterations to organs or tissues that could be directly attributable to the consumption of the compound.

Microscopic examinations of tissues revealed no histopathological lesions or trends directly attributable to consumption of the compound.

There were no differences between control animals and those receiving any level of X-5120 which could be attributed to the compound.

9200 LEESBURG TURNPIKE • VIENNA, VIRGINIA 22180 • TELEPHONE (703) 893-5400

INTRODUCTION

The purpose of this study was to evaluate and characterize the chronic oral toxicity of X-5120 in dogs. The administration of X-5120 in the diet was begun on July 14, 1969, reached the 52-week interval on July 13, 1970, and was terminated July 12, 1971.

MATERIAL

Identification X-5120.

Description A fine, white powder.

Receipt Date June 2, 1969.

Purity Assumed 100% active ingredient.

METHODS

Experimental Animals

Breed: Young adult purebred beagles.

Number: Sixteen males and 16 females.

Body Weight (At Initiation): From 6.9 to 14.5 kg.

Housing: Individually in metal cages.

Diet: Ground Wayne Dog Meal and water ad libitum.

Groups and Dietary Levels

Group No.	No. of Animals male	No. of Animals female	Dietary Level ppm
1	4	4	0
2	4	4	500
3	4	4	5,000
4	4	4	50,000

Diet Preparation

The test material, X-5120, was incorporated into the basal laboratory diet of Ground Wayne Dog Meal on a weight-per-weight basis and thoroughly mixed in a twin-shell blender to provide appropriate dietary levels. Fresh compound/diet mixtures were prepared weekly.

Compound Administration

Compound/diet mixtures were freely available to the compound-treated dogs seven days a week. The control dogs received the basal laboratory diet only.

Observations and Records

Daily: Appearance, behavior, appetite, elimination, and signs of compound effect.

Weekly: Body weights and food consumption for the first 26 weeks.

Biweekly: Body weights and food consumption for the second 26 weeks.

Monthly: Body weights and food consumption for the second 52 weeks.

Clinical Laboratory Studies

Performed: Initially and at four, 13, 26, 52, 78, and 104 weeks.

Hematological Studies: Hematocrit and hemoglobin determinations, erythrocyte count, and total and differential leukocyte count.

Blood Chemistry Studies: Determinations of fasting blood sugar, blood urea nitrogen, total serum protein, total serum bilirubin, serum albumin, serum sodium, serum potassium, serum alkaline phosphatase, serum electrophoresis, bromsulphalein liver function test, serum chloride, carbon dioxide, serum calcium, serum glutamic-pyruvic transaminase, and serum glutamic-oxaloacetic transaminase.

Urine Analysis: Specific gravity, pH, glucose, ketones, total protein, bilirubin, and microscopic examination of sediment.

Terminal Studies

Sacrifice: After 52 weeks on study, one male and one female from each group was sacrificed. At 104 weeks, all remaining dogs were sacrificed.

Gross Necropsies: On all sacrificed dogs.

Organ Weights (For Each Dog): Thyroids, heart, liver, spleen, kidneys, adrenals, and testes with epididymis.

Tissues Preserved in 10% Neutral Buffered Formalin: Brain, pituitary, eye, thyroid, lung, heart, liver, mesenteric lymph node, urinary bladder, uterus, skin, rib junction, gallbladder, spleen, kidney, adrenal, stomach, pancreas, small intestine, large intestine, prostate, ovary, bone marrow, nerve with muscle, and any unusual lesions.

In Bouin's Fixative - Testes with epididymis.

Histopathological Examination

The following tissues from all sacrificed control and high level dogs were stained with hematoxylin and eosin and examined microscopically: thyroids, heart, liver, gallbladder, spleen, kidneys, adrenals, ovary, testis, stomach, pancreas, small intestine, large intestine, mesenteric lymph node, urinary bladder, and bone marrow.

Only the following tissues were examined from the low and intermediate levels: liver, kidneys, and unusual lesions.

RESULTS

Appearance, Behavior, Body Weight Changes, and Signs of Compound Effect

Individual body weights and food and compound consumption are presented in Table No. 1.

All test and control dogs generally maintained normal appearance and behavior and exhibited good appetite and normal elimination throughout the study. No signs were evident which could be attributed to the administration of the test compound.

There were isolated instances of skin conditions among control and treated dogs, characterized by a thinning of the hair coat particularly on flanks and extremities.

Fluctuations in body weight were observed during the study in a few control and treated dogs, resulting in transient thin appearance for some of the affected animals. However, terminal body weight for each animal on study

exceeded initial body weight, except for four dogs, one in each group, sacrificed at 52 weeks, which essentially maintained weight (changes from -1% to +3%). The remaining four dogs sacrificed at 52 weeks gained 6% to 34% of their respective initial weights. Terminal body weight gains at 104 weeks ranged from 5% to 63% of respective initial weights. There was no dose-related pattern for body weight changes.

Occasional body weight fluctuations and sporadic cases of skin conditions are common among dogs subject to chronic toxicity tests and are in no way related to administration of the test compound.

During the first year on study male high level Dog No. 14252 developed entropion of the right lower eyelid; this condition was corrected surgically during Week 57. Female low level Dog No. 14231 showed transitory slight swelling of Harder's gland in one eye during Weeks 8 and 9.

Clinical Laboratory Studies

Results of clinical laboratory studies are presented in Tables No. 2 (hematology), No. 3 (blood chemistry), and No. 4 (urine analysis).

Evaluation of hematological, blood chemistry, and urine analysis data failed to reveal compound-related alterations or trends at any dosage level in any of the parameters examined. Incidental changes in values for some of the parameters tested are discussed in the following.

Hematology: Female control Dog No. 14199 had rather high values for hematocrit and hemoglobin at 104 weeks. Occasional instances of borderline low hematocrit and hemoglobin values among some of the male dogs and scattered instances of slightly to moderately elevated eosinophil counts among male and female dogs were not consistent. There were also rare occasions of slightly elevated band cell and monocyte counts.

Blood Chemistry: Mean values for all blood chemistry parameters examined were within ranges considered to be normal for beagles at Hazleton Laboratories. Scattered slight deviations from the norm for some of the parameters tested were encountered, but were of no significance in the interpretation of test results. Values for blood sugar declined slightly as the study progressed, which is consistent with increasing age of the dogs. The relatively high pretreatment electrophoresis values for the alpha I protein fraction, when compared with subsequent data for this parameter, were consistent for all groups and apparently were due to subtle processing differences.

Urine Analysis: Results of urine analyses were generally not remarkable. The relatively high urine bilirubin contents recorded for the male dogs at 13 weeks were, likewise consistent between all groups, although values were lower for high level dogs when compared with control data.

Gross Pathology

Necropsies at 52 and 104 weeks failed to reveal any gross tissue alterations which could be attributed to ingestion of the test compound.

Incidental tissue changes noted at the 52-week interim sacrifice included a slightly reddened mucosa in the small intestine of control male Dog No. 14239, marked petechiae in the urinary bladder mucosa of low level male Dog No. 14241, and a small cyst at the base of the pituitary in low level female Dog No. 14231 and middle level female Dog No. 14334.

The following incidental tissue alterations were observed at the 104-week terminal sacrifice.

In the Controls: A small cyst at the base of the pituitary in male Dogs No. 14118 and No. 14240, and a light brown area at the corticomedullary junction of the kidney in female Dog No. 14220.

At the Low Level: Red to black hemorrhagic-appearing areas in the jejunum and ileum, and dark longitudinal striations in the colic mucosa of male Dog No. 14243; subendocardial reddening in the septum of the left ventricle of female Dog No. 14336.

At the Middle Level: Slightly reddened mucosa in various sections of the small intestine in male Dog No. 13988, and a scar-like tissue formation on the spleen of male Dog No. 14249.

At the High Level: A small right testis in male Dog No. 14252, blackened areas on the edge of the spleen in male Dog No. 14256, and clear fluid in the uterus of female Dog No. 14282.

Organ Weights

Terminal body weights, organ weights, and organ/body weight ratios are presented in Table No. 5.

Organ weights and organ/body weight ratios essentially were comparable between groups. No compound-related trends were evident. Isolated instances of rather high or low organ weights apparently reflected individual variation rather than compound effect.

Microscopic Pathology

No histopathologic lesions or trends were observed which could be directly attributed to consumption of the compound. Certain spontaneous histopathologic changes were observed in treated and control beagles, but these alterations were not considered to have been influenced by the compound administration.

Histologic features of the thyroid and adrenal were not significantly different among the treated and control beagles. Siderotic nodules were seen in the spleens of one Group No. 3 male and one Group No. 4 female, and were considered to be spontaneous alterations. Although the amount of pigment (hemosiderin) in the spleen of the female animals in the high level group appeared slightly elevated, this finding was not considered significant since, in our experience, the occurrence of splenic pigment tends to be a very variable parameter.

A focal interstitial nephritis was seen in controls, as well as, treated animals. Additionally, a nonsuppurative pyelitis or mononuclear cell infiltration of the pelvis occurred in treated and control animals. Although the occurrence of nonsuppurative pyelitis was more common in the treated animals, a dose-related trend was not apparent.

The examination of ovarian sections from the female treated animals did not reveal significant histologic differences when compared to controls. One Group No. 4 male (Dog No. 14252) had a unilateral orchitis and tubular atrophy; a bilateral epididymitis was seen in this same animal. These lesions were considered to be of spontaneous occurrence.

The uterine section from one animal (Dog No. 14282) revealed changes which were considered related to the stage of the estrus cycle.

Hematogenic activity, as displayed in hematoxylin and eosin stained sections of bone marrow, was similar among the treated and control beagles. Sections of heart, gallbladder, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, and urinary bladder were, in general, not remarkable or displayed only scattered, rare alterations.

In summary, the administration of compound X-5120 to beagle dogs at levels of 500, 5000, and 50,000 ppm for 104 weeks did not produce histologically discernable lesions in the tissues examined.

Submitted by William A. Olson
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gbb

NOTE: The research described in this report involved animals maintained in animal care facilities fully accredited by the American Association for Accreditation of Laboratory Animal Care.

EXPLANATION OF FOOTNOTES

Key to urine analysis table is as follows:

T = trace (±)

0 = negative

1 = slight (+)

2 = moderate (++)

3 = marked (+++)

4 = severe (++++)

TNTC = too numerous to count

Table No. 1 - Body weights and food consumption for male and female purebred beagles.

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 1 - CONTROL							
	DOG NO. 14116 M		DOG NO. 14118 M		DOG NO. 14239 M		DOG NO. 14240 M	
	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk
Initial	10.4		8.5		11.6		10.5	
1	10.2	1.8	8.6	1.8	11.1	2.1	10.7	1.9
2	10.0	1.8	8.7	1.7	10.8	2.0	10.4	1.6
3	9.9	2.0	8.7	1.7	11.4	2.7	10.4	2.2
4	10.3	2.3	8.4	1.5	11.0	2.1	11.3	2.7
5	9.9	2.1	8.2	1.5	11.4	2.2	10.6	1.7
6	9.9	2.1	8.6	1.8	11.8	2.6	11.1	2.6
7	10.2	2.5	8.4	1.9	11.9	2.4	11.0	2.4
8	9.7	2.4	8.3	1.8	11.8	2.3	11.7	2.2
9	10.0	2.7	8.4	2.1	11.9	2.7	10.9	2.0
10	9.6	2.1	8.4	1.9	11.8	2.0	10.8	2.0
11	10.0	2.4	8.6	2.2	12.0	2.5	11.1	2.2
12	9.4	2.5	8.6	2.1	11.8	2.3	11.3	2.0
13	9.7	2.9	8.6	2.2	11.9	2.3	11.2	2.3
14	9.7	2.7	8.6	2.2	11.9	2.6	11.0	1.8
15	10.0	2.7	8.4	2.4	12.3	2.8	10.9	2.5
16	10.4	2.4	8.3	2.4	11.7	2.0	11.2	2.5
17	9.9	2.2	8.5	1.8	11.7	2.2	11.0	2.0
18	9.9	2.5	8.2	2.3	11.4	2.4	10.6	2.3
19	9.8	2.2	8.5	2.2	11.4	2.2	10.4	2.3
20	9.8	2.3	8.7	2.0	11.2	2.1	10.3	2.4
21	10.0	2.4	9.0	1.8	11.4	2.8	10.8	2.8
22	9.5	2.0	8.9	1.8	11.5	1.3	10.2	2.0
23	9.6	2.2	8.9	1.6	12.8	2.0	10.3	2.1
24	9.5	2.2	9.2	2.2	11.6	2.2	9.7	2.3
25	10.0	2.8	8.7	1.7	11.9	2.7	10.0	2.8
26	9.4	2.0	8.8	2.0	11.6	2.2	9.8	2.2

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 1 - CONTROL (CONTINUED) DOG NO. 14116 M WT. kg.	FOOD kg/wk	DOG NO. 14118 M WT. kg.	FOOD kg/wk	DOG NO. 14239 M WT. kg.	FOOD kg/wk	DOG NO. 14240 M WT. kg.	FOOD kg/wk
28	9.1	2.5	8.5	1.8	11.1	2.1	9.8	2.2
30	8.7	2.3	8.5	2.3	10.9	2.2	9.6	2.3
32	8.1	2.3	8.6	2.2	11.0	2.7	9.7	2.3
34	8.4	2.2	9.3	1.8	10.8	2.2	10.2	2.2
36	9.0	3.2	9.1	2.0	11.6	3.3	10.7	3.2
38	8.4	3.3	8.9	2.2	11.4	3.4	10.2	3.4
40	8.1	2.8	9.0	1.1	12.0	2.1	10.8	2.7
42	7.9	3.2	9.5	1.9	11.5	2.7	10.9	2.8
44	7.1	3.3	9.1	2.2	11.1	2.8	10.7	2.2
46	8.2	3.2	9.2	2.2	12.1	3.3	11.2	2.6
48	8.1	2.8	8.9	1.8	12.0	2.0	10.5	2.1
50	8.1	2.2	9.1	2.0	12.8	2.8	11.2	2.7
52	9.4	3.0	9.0	2.0	12.3	2.3	11.0	2.7
56	8.5	2.2	8.7	1.8	Sacrificed		10.6	2.2
60	8.3	3.1	8.5	2.2			10.2	2.2
64	8.6	2.6	8.6	2.2			10.0	2.7
68	7.8	2.8	8.7	2.3			10.1	2.9
72	6.6	2.7	8.3	2.6			9.6	2.8
76	7.4	2.5	8.4	2.1			10.0	2.5
80	6.6	2.0	9.6	2.3			12.0	3.5
84	7.8	2.0	10.1	2.3			11.6	2.5
88	10.7	2.5	9.8	2.3			12.5	2.1
92	11.6	3.0	9.8	2.1			12.5	2.5
96	12.5	2.5	9.9	2.1			12.5	2.3
100	12.6	2.2	9.3	2.3			12.4	2.3
104	12.7	2.6	9.5	2.3			12.7	2.5
% of Change	22%		11%				20%	
Wt. Change, kg.	+2.3		+1.0				+2.2	
Average Food Consumption		2.51		2.22				2.53

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 1 - CONTROL (CONTINUED)							
	DOG NO. 14199 F		DOG NO. 14209 F		DOG NO. 14219 F		DOG NO. 14220 F	
	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk
Initial	8.9		10.8		10.0		11.3	
1	8.6	2.0	10.8	2.0	10.3	2.3	11.0	1.6
2	8.5	1.8	11.0	2.0	9.8	2.0	10.7	1.7
3	8.7	2.1	11.1	2.0	11.2	1.8	11.0	1.9
4	8.9	2.2	11.0	1.6	10.1	1.5	10.5	1.5
5	9.0	1.8	11.0	1.6	9.8	1.3	10.6	1.8
6	8.6	2.5	10.9	1.0	9.5	1.8	10.8	1.5
7	9.2	2.6	11.1	2.1	9.8	2.0	11.2	1.8
8	8.6	2.2	10.4	2.3	9.5	2.2	10.8	1.5
9	8.9	2.4	10.8	2.5	9.7	2.0	11.0	1.8
10	8.6	2.0	10.9	2.3	10.1	2.1	10.3	*
11	9.0	2.5	11.0	2.0	10.0	2.2	10.4	2.0
12	8.4	2.4	10.2	2.4	9.8	2.3	10.6	2.0
13	8.9	2.6	10.6	2.8	10.2	2.6	10.9	2.0
14	8.8	2.5	10.4	2.6	10.2	2.7	10.6	1.8
15	8.3	2.4	10.2	2.2	10.3	2.7	10.8	2.1
16	8.8	2.4	10.4	2.7	9.6	2.2	10.7	1.7
17	7.6	2.2	9.9	2.3	10.0	2.0	11.0	2.2
18	7.5	2.4	9.8	2.6	9.9	2.3	11.0	2.4
19	7.1	2.0	9.9	2.2	10.3	2.2	10.9	2.3
20	7.1	2.3	10.3	2.6	10.6	2.2	11.0	2.3
21	7.4	2.7	11.4	2.9	10.5	2.0	11.4	2.2
22	6.8	1.8	10.5	2.5	10.4	2.0	11.2	2.0
23	6.8	2.2	10.7	2.0	10.5	2.3	11.2	1.6
24	6.9	2.2	10.8	1.4	10.4	1.3	11.3	2.0
25	7.1	2.9	10.6	1.9	10.7	2.5	11.2	1.7
26	7.0	2.1	10.8	2.4	11.0	2.3	11.3	1.8

* Not valid, wet feed

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

GROUP NO. 1 - CONTROL (CONTINUED)

TIME INTERVAL weeks	DOG NO. 14199 F WT. kg.	DOG NO. 14199 F FOOD kg/wk	DOG NO. 14209 F WT. kg.	DOG NO. 14209 F FOOD kg/wk	DOG NO. 14219 F WT. kg.	DOG NO. 14219 F FOOD kg/wk	DOG NO. 14220 F WT. kg.	DOG NO. 14220 F FOOD kg/wk
28	7.5	2.3	10.4	2.2	11.3	2.3	10.9	2.3
30	7.2	2.2	9.9	2.3	10.5	1.4	10.8	2.1
32	6.8	2.3	10.1	2.7	10.9	2.8	10.8	2.2
34	6.9	2.2	10.7	3.1	10.5	2.1	11.5	2.1
36	7.8	3.1	11.2	3.2	11.0	2.2	11.5	2.2
38	7.5	3.3	10.6	2.4	10.1	2.1	11.4	2.4
40	7.5	2.8	11.5	1.7	10.6	2.3	12.2	2.5
42	7.9	2.8	11.1	2.3	10.8	2.6	12.2	1.9
44	7.1	2.7	10.2	1.9	10.6	2.0	12.0	1.9
46	9.0	2.2	11.1	2.8	10.7	3.2	11.6	1.2
48	8.3	3.1	10.7	2.5	10.7	2.1	11.7	2.0
50	9.3	2.7	10.7	2.7	11.4	2.5	12.0	1.9
52	9.6	3.3	11.1	2.3	10.9	2.0	12.2	1.8
56	9.8	2.1	Sacrificed		10.2	2.4	11.6	1.2
60	9.9	2.0			10.6	1.4	12.0	2.0
64	10.1	2.7			10.8	2.1	11.9	2.7
68	10.4	2.7			11.4	2.7	12.5	2.6
72	10.4	2.9			10.8	2.3	13.2	2.1
76	9.9	2.4			11.0	2.5	13.7	2.5
80	10.8	3.8			11.7	2.1	13.6	1.4
84	10.6	3.0			11.7	2.3	13.8	2.2
88	11.5	2.9			12.1	2.3	14.5	1.8
92	10.9	2.4			11.7	1.3	14.7	2.5
96	11.7	2.4			12.5	1.9	16.1	2.3
100	11.6	2.4			12.5	2.4	16.2	2.2
104	11.2	2.1			13.0	1.8	16.9	2.5
% of Change	25%				30%		49%	
Wt. Change, kg.	+2.3				+3.0		+5.6	
Average Food Consumption		2.60				2.11		2.15

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 2 - 500 PPM							
	DOG NO. 14241 M		DOG NO. 14242 M		DOG NO. 14243 M		DOG NO. 14246 M	
	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk
Initial	11.1		12.6		11.3		8.4	
1	10.7	1.5	12.1	2.2	11.5	2.2	8.1	1.8
2	10.5	2.0	11.5	2.2	11.6	2.2	8.2	2.1
3	10.7	2.8	11.9	2.9	12.2	2.6	8.1	1.7
4	11.2	2.8	12.1	2.7	12.2	2.2	8.1	1.4
5	11.1	2.3	11.5	2.1	11.9	2.0	8.0	2.3
6	11.0	1.7	11.8	2.6	11.9	2.4	8.0	2.0
7	11.5	2.5	12.3	3.1	11.9	2.5	8.5	2.2
8	11.4	1.7	12.0	2.5	11.7	2.5	8.4	2.1
9	11.1	1.7	12.1	2.7	11.6	2.5	8.3	1.9
10	11.3	2.2	12.0	2.6	11.9	2.7	8.2	1.8
11	11.1	2.0	12.1	2.8	12.0	2.6	8.3	2.5
12	10.8	2.3	11.6	2.3	11.5	2.2	8.3	2.1
13	11.4	2.3	11.6	2.7	11.8	2.8	8.7	2.2
14	11.3	2.5	11.6	2.4	12.0	2.7	8.6	2.2
15	11.5	2.2	11.6	3.4	11.9	2.8	8.6	2.8
16	11.6	2.2	11.6	2.5	11.9	2.6	8.7	2.1
17	11.8	2.2	11.3	2.2	11.4	2.2	8.7	2.1
18	11.5	2.8	12.3	2.8	11.8	2.8	8.7	2.3
19	11.2	2.2	11.0	2.3	11.1	2.2	8.8	2.2
20	11.1	2.5	11.3	2.9	10.9	2.4	8.7	2.3
21	11.1	2.3	12.9	4.8	11.3	2.2	8.8	2.2
22	10.5	2.0	12.2	1.8	10.8	2.0	8.7	1.9
23	11.2	2.2	12.2	2.2	10.2	2.0	9.9	1.5
24	10.6	2.0	11.9	2.2	10.4	2.3	9.0	2.0
25	11.2	2.8	11.6	3.0	11.0	2.7	8.8	2.2
26	11.0	2.3	11.0	2.1	10.4	2.2	8.8	2.1

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 2 - 500 PPM (CONTINUED) DOG NO. 14241 M WT. kg.	FOOD kg/wk	DOG NO. 14242 M WT. kg.	FOOD kg/wk	DOG NO. 14243 M WT. kg.	FOOD kg/wk	DOG NO. 14246 M WT. kg.	FOOD kg/wk
28	10.6	2.2	11.4	2.2	10.3	2.2	8.3	2.1
30	10.0	2.2	10.2	2.2	9.5	2.2	8.4	2.2
32	9.5	2.7	10.2	2.0	9.8	2.7	8.2	2.8
34	9.7	2.2	10.8	2.3	10.2	2.2	8.5	2.2
36	9.2	3.2	11.4	3.2	10.4	3.1	9.1	3.3
38	8.7	3.3	10.7	3.3	10.3	3.2	8.5	2.1
40	10.6	3.0	11.6	2.7	11.0	2.5	9.0	2.5
42	9.8	2.7	12.5	3.3	10.9	2.8	9.3	2.2
44	9.2	2.7	11.8	2.8	10.4	2.7	9.5	2.1
46	10.1	3.3	12.2	3.0	11.5	3.1	9.4	1.9
48	10.3	2.6	12.8	3.7	11.5	3.3	9.0	2.0
50	10.6	2.1	12.8	2.6	11.9	2.7	9.4	2.1
52	11.2	2.2	13.0	3.1	12.1	3.2	9.0	2.0
56	Sacrificed		12.8	2.2	12.2	2.2	9.1	2.3
60			12.1	3.1	11.9	3.5	8.6	2.2
64			12.8	2.5	12.4	2.8	8.7	2.7
68			12.0	2.8	11.2	2.8	9.0	2.8
72			11.2	2.6	11.4	2.5	8.7	2.3
76			11.6	2.4	11.7	2.4	8.6	2.3
80			13.7	4.0	14.0	4.0	9.5	2.1
84			14.0	3.0	13.4	2.5	9.9	2.1
88			16.3	3.0	14.8	3.0	9.9	2.1
92			16.7	3.0	14.1	2.4	10.1	2.4
96			17.2	3.5	14.6	3.0	10.3	2.3
100			16.1	2.5	14.4	2.4	10.2	2.5
104			18.9	3.0	14.2	2.5	10.5	2.1
% of Change			50%		25%		25%	
Wt. Change, kg.			+6.3		+2.9		+2.1	
Average Food Consumption				2.89		2.76		2.32

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 2 - 500 PPM (CONTINUED) DOG NO. 14231 F WT. kg.	FOOD kg/wk	DOG NO. 14336 F WT. kg.	FOOD kg/wk	DOG NO. 14337 F WT. kg.	FOOD kg/wk	DOG NO. 14338 F WT. kg.	FOOD kg/wk
Initial	10.0		9.0		8.1		8.8	
1	10.0	1.7	9.2	1.7	8.1	1.5	8.5	1.6
2	9.4	2.0	9.8	2.0	8.5	1.8	8.7	1.8
3	10.3	2.8	10.2	2.2	8.2	1.8	9.6	2.7
4	10.4	2.4	9.8	1.6	8.4	1.9	9.8	2.1
5	9.9	1.5	9.9	2.0	8.4	1.6	9.6	1.8
6	9.9	1.4	10.2	2.0	8.4	1.6	9.9	2.3
7	10.0	2.1	10.2	2.2	8.7	1.9	9.9	1.9
8	9.9	1.7	10.2	2.1	9.0	2.1	10.1	2.4
9	9.5	1.7	10.2	1.9	8.8	1.6	10.0	1.8
10	9.4	1.8	10.5	2.3	8.7	2.0	10.2	2.0
11	9.6	2.0	10.6	1.8	8.8	2.0	10.5	1.8
12	9.6	2.2	10.6	2.1	8.8	2.2	10.1	1.8
13	9.8	1.9	10.5	2.3	9.0	2.2	10.3	1.9
14	9.7	2.0	10.4	2.2	8.9	1.8	10.0	2.0
15	10.2	2.3	10.4	2.1	8.8	2.4	10.5	1.5
16	10.1	1.9	10.7	2.4	9.2	2.0	10.0	1.3
17	10.1	2.2	10.7	2.1	9.2	2.0	10.6	2.2
18	9.8	1.9	10.6	2.2	8.9	1.6	10.5	2.3
19	10.3	2.0	10.6	2.2	9.1	1.8	10.5	2.0
20	9.9	1.8	10.6	2.2	9.1	1.6	10.4	1.3
21	10.6	2.1	10.9	2.2	8.9	0.7	10.6	1.2
22	10.4	1.4	10.9	1.5	8.7	1.6	10.9	2.2
23	10.4	1.7	11.2	2.2	8.8	1.6	10.8	1.8
24	10.5	1.9	11.4	1.2	9.1	1.5	10.6	1.6
25	10.5	2.2	11.0	1.1	9.0	1.9	10.9	2.0
26	10.5	1.9	11.0	1.2	9.0	1.8	11.0	1.5

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 2 - 500 PPM (CONTINUED)							
	DOG NO. 14231 F		DOG NO. 14336 F		DOG NO. 14337 F		DOG NO. 14338 F	
	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk
28	10.4	1.7	11.3	1.8	8.9	2.4	10.6	1.5
30	10.5	2.1	10.9	2.3	8.8	1.6	11.0	1.9
32	10.3	2.0	10.7	2.1	8.7	2.0	10.9	2.2
34	10.9	1.8	11.0	2.3	9.0	2.0	11.1	2.2
36	11.1	2.1	11.5	3.1	9.0	1.9	12.0	3.2
38	10.5	1.6	11.3	*	8.9	2.3	11.3	1.7
40	10.0	1.5	11.4	1.6	8.9	1.6	11.5	1.9
42	10.0	2.1	11.5	2.2	8.9	1.6	12.0	2.1
44	10.3	2.0	11.6	1.8	9.1	1.8	11.7	1.6
46	10.4	2.0	11.7	2.0	8.9	1.8	11.9	1.5
48	10.6	2.1	11.7	1.9	9.2	2.0	12.0	2.5
50	10.7	2.2	12.2	2.2	9.3	1.6	12.3	1.4
52	10.6	1.8	12.2	2.3	9.7	2.4	12.3	2.3
56	Sacrificed		12.2	1.9	9.3	2.0	12.3	1.7
60			12.3	2.1	9.6	1.6	11.6	1.4
64			11.7	2.2	9.5	1.9	11.6	1.9
68			12.1	1.9	9.1	1.4	10.4	0.7
72			12.1	2.0	9.1	2.3	9.9	2.6
76			12.0	2.5	9.5	1.9	10.9	2.5
80			13.0	1.5	9.8	1.8	12.5	2.9
84			13.0	1.6	10.4	1.9	12.0	1.4
88			13.9	2.1	10.6	1.7	13.2	2.4
92			13.3	1.9	10.5	1.7	13.9	2.3
96			13.3	1.8	10.8	1.9	13.8	1.5
100			13.8	2.3	10.2	1.2	13.8	0.7
104			13.6	1.8	10.9	1.9	14.4	2.1
% of Change			51%		34%		63%	
Wt. Change, kg.			+4.6		+2.8		+5.6	
Average Food Consumption				1.96		1.78		1.85

* Not valid

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 3 - 5000 PPM							
	DOG NO. 13988 M		DOG NO. 14245 M		DOG NO. 14249 M		DOG NO. 14250 M	
	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk
Initial	14.5		10.7		9.8		8.9	
1	14.1	2.2	10.4	2.3	9.7	1.8	8.6	2.0
2	14.6	2.2	10.3	1.9	9.7	2.0	8.4	1.8
3	14.1	2.4	10.3	2.0	9.7	2.1	8.9	2.9
4	14.0	2.2	10.9	2.7	10.0	2.2	8.8	2.7
5	13.4	2.1	10.5	2.0	9.9	1.9	8.3	2.0
6	13.4	2.7	10.3	2.0	9.9	2.1	8.4	2.7
7	13.3	2.6	10.5	2.1	9.7	1.9	8.5	2.8
8	12.7	2.6	10.7	2.7	9.6	2.4	8.1	2.7
9	12.6	2.7	10.5	1.8	10.0	2.4	8.4	2.9
10	12.5	2.7	10.9	2.1	10.0	2.1	8.5	2.8
11	12.8	2.7	11.0	2.1	10.2	2.1	8.6	2.2
12	12.0	2.3	10.7	2.2	10.0	2.4	7.8	2.3
13	12.0	2.5	10.9	2.7	10.3	2.8	8.1	2.8
14	12.2	2.6	10.8	2.7	10.0	2.5	8.1	2.6
15	12.2	2.8	10.4	2.1	9.9	2.2	7.9	2.4
16	11.9	2.8	10.1	1.9	9.7	2.4	7.7	2.7
17	11.6	2.2	9.7	2.2	9.3	2.0	7.2	2.0
18	11.4	2.4	9.1	2.1	9.1	2.1	7.0	2.3
19	11.2	2.4	9.1	2.0	8.7	2.2	7.1	2.0
20	11.3	2.8	8.7	2.0	9.1	2.4	7.0	2.3
21	11.7	2.9	9.1	2.5	9.4	2.6	7.6	2.8
22	11.1	2.0	8.8	2.2	9.4	2.2	7.2	2.2
23	11.1	2.2	8.8	2.2	9.5	2.4	7.2	2.1
24	11.0	2.0	8.7	2.3	9.2	2.0	7.2	2.5
25	11.3	2.6	9.0	2.5	9.5	2.5	7.5	2.5
26	11.0	2.5	8.8	2.1	9.6	2.1	7.3	2.2

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 3 - 5000 PPM (CONTINUED) DOG NO. 13988 M WT. kg.	FOOD kg/wk	DOG NO. 14245 M WT. kg.	FOOD kg/wk	DOG NO. 14249 M WT. kg.	FOOD kg/wk	DOG NO. 14250 M WT. kg.	FOOD kg/wk
28	11.1	2.2	8.7	2.2	9.4	2.3	7.6	2.3
30	10.3	2.3	8.2	2.2	9.2	2.2	7.2	2.1
32	10.3	2.4	8.0	2.2	9.1	2.4	7.1	2.3
34	10.8	2.3	8.5	2.6	9.2	2.1	7.6	2.1
36	11.2	3.3	8.9	3.1	10.0	3.1	7.7	3.0
38	10.7	2.9	8.4	2.6	9.5	2.2	7.4	2.9
40	11.3	2.7	9.9	2.7	10.3	2.4	8.1	2.5
42	11.6	2.7	9.2	2.5	10.2	2.7	8.2	2.8
44	11.2	2.5	8.7	2.7	9.8	2.3	7.8	2.6
46	12.3	3.2	9.7	3.1	10.0	2.1	8.3	2.6
48	12.6	2.6	9.7	2.8	10.5	2.6	8.6	3.0
50	13.0	2.5	9.5	2.7	10.5	2.0	9.0	2.6
52	13.6	3.2	10.3	2.7	10.6	2.2	9.2	2.7
56	13.5	2.2	9.4	1.8	10.5	2.0	Sacrificed	
60	13.6	2.8	9.6	3.1	10.1	2.1		
64	13.7	2.6	9.3	2.7	10.1	2.7		
68	13.5	2.7	9.1	2.6	10.5	2.2		
72	13.1	2.9	9.6	2.7	10.8	2.7		
76	13.0	2.5	8.8	2.4	10.2	2.5		
80	14.4	2.0	9.5	1.4	10.7	1.3		
84	15.2	2.4	10.7	3.0	11.1	2.0		
88	15.4	2.9	11.6	2.3	11.4	2.2		
92	15.5	2.9	11.4	2.9	11.4	2.2		
96	16.4	2.7	12.1	2.3	11.9	2.3		
100	15.7	1.9	11.8	2.5	11.9	2.2		
104	16.5	2.8	12.0	3.0	11.8	2.2		
% of Change	13%		12%		20%			
Wt. Change, kg.	+2.0		+1.3		+2.0			
Average Food Consumption		2.56		2.51		2.20		

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 3 - 5000 PPM (CONTINUED) DOG NO. 14331 F WT. kg.	FOOD kg/wk	DOG NO. 14332 F WT. kg.	FOOD kg/wk	DOG NO. 14334 F WT. kg.	FOOD kg/wk	DOG NO. 14335 F WT. kg.	FOOD kg/wk
Initial	11.4		6.9		9.3		8.9	
1	10.1	1.0	7.6	2.2	9.6	2.0	8.3	1.0
2	10.4	2.1	7.6	1.9	9.8	2.0	8.7	1.9
3	11.4	2.5	7.9	2.0	9.8	1.9	8.8	2.0
4	11.5	2.1	7.6	1.7	10.1	2.1	9.2	2.0
5	11.2	1.8	7.7	1.9	10.0	1.9	8.7	1.3
6	11.5	1.9	7.6	1.8	9.6	1.4	8.8	1.6
7	11.4	2.0	7.5	2.0	10.3	2.2	9.1	2.0
8	11.5	2.1	7.7	2.3	10.5	2.2	9.2	2.2
9	11.3	2.1	7.6	2.2	10.4	2.0	9.4	2.2
10	11.4	2.7	7.3	2.0	10.4	1.9	9.7	2.2
11	11.6	2.4	7.4	2.0	10.2	1.9	9.9	2.0
12	11.8	2.2	7.4	2.2	10.2	2.0	9.8	2.1
13	10.0	2.4	7.4	2.3	10.4	2.0	10.4	2.2
14	11.7	2.2	7.7	2.4	10.4	2.2	10.1	2.0
15	11.4	2.1	7.8	2.7	10.3	1.8	9.8	2.1
16	11.5	2.2	7.7	2.2	10.4	2.2	10.0	2.1
17	11.8	2.2	7.2	2.4	10.4	1.8	10.3	2.2
18	11.5	2.3	7.1	2.3	10.7	2.3	10.3	2.2
19	11.7	2.1	7.2	2.2	10.5	2.1	10.3	2.0
20	11.3	2.4	6.6	2.6	10.8	1.9	10.4	1.9
21	12.0	2.5	7.3	2.7	10.8	1.8	10.6	2.4
22	11.8	2.3	7.3	2.2	10.7	2.0	10.6	2.2
23	12.2	2.1	7.3	2.2	11.0	1.8	10.8	2.1
24	12.2	2.0	7.4	2.0	11.0	2.0	11.0	2.0
25	12.2	2.2	7.8	2.8	10.9	2.3	10.8	1.7
26	12.0	1.9	7.7	2.3	11.5	2.3	10.7	1.9

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 3 - 5000 PPM (CONTINUED) DOG NO. 14331 F WT. kg.	FOOD kg/wk	DOG NO. 14332 F WT. kg.	FOOD kg/wk	DOG NO. 14334 F WT. kg.	FOOD kg/wk	DOG NO. 14335 F WT. kg.	FOOD kg/wk
28	11.7	2.2	7.5	2.0	10.9	1.6	10.7	2.1
30	11.5	2.3	6.9	2.2	11.1	2.0	10.5	1.7
32	11.5	2.5	6.6	2.1	10.8	2.2	10.7	2.1
34	11.9	2.3	7.1	2.2	11.4	2.2	10.8	2.2
36	12.4	3.1	7.6	3.3	11.7	2.2	10.9	2.3
38	12.0	2.6	7.5	2.8	12.0	2.2	10.7	2.0
40	12.3	1.6	8.3	2.5	12.1	2.2	11.2	*
42	12.4	2.0	8.5	2.6	12.2	2.6	10.6	*
44	11.7	2.2	8.7	2.1	11.5	1.5	10.4	*
46	12.7	*	8.7	2.1	11.9	2.0	11.3	*
48	12.2	2.5	8.9	2.3	12.0	2.0	11.2	2.5
50	12.3	2.2	9.0	2.1	12.7	2.4	11.5	1.5
52	12.4	2.9	8.8	2.0	12.5	2.3	11.4	1.7
56	14.0	2.1	8.3	1.6	Sacrificed		10.8	1.4
60	13.3	2.1	8.2	2.2			10.9	1.5
64	13.3	2.2	8.2	2.8			11.0	2.1
68	14.8	2.2	8.8	2.0			11.7	2.0
72	14.4	2.3	8.8	2.9			11.6	2.2
76	14.6	2.5	8.8	2.2			12.1	2.4
80	14.6	1.1	8.6	1.2			11.9	0.7
84	15.7	2.1	9.7	1.9			13.1	2.2
88	16.4	1.9	10.0	1.8			13.3	1.8
92	16.5	2.4	10.3	2.4			13.6	2.1
96	17.4	2.3	10.6	1.8			13.8	1.7
100	17.2	1.8	10.7	2.0			13.5	1.1
104	17.8	2.3	9.6	1.5			13.6	1.7
% of Change	56%		37%				52%	
Wt. Change, kg.	+6.4		+2.7				+4.7	
Average Food Consumption		2.10		2.02				1.76

* Not valid

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 4 - 50,000 PPM							
	DOG NO. 14252 M		DOG NO. 14256 M		DOG NO. 14257 M		DOG NO. 14258 M	
	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk
Initial	8.8		8.9		10.6		9.1	
1	8.5	1.3	10.0	2.0	9.9	0.8	8.6	1.2
2	8.8	1.9	9.8	2.0	10.1	2.1	8.7	2.1
3	8.9	1.7	9.8	2.1	10.2	1.9	9.4	2.4
4	8.9	1.6	9.9	2.2	10.0	1.4	9.6	2.2
5	9.0	2.1	10.0	2.2	9.8	1.3	9.3	1.4
6	9.6	2.1	10.1	2.2	9.7	1.2	9.6	2.4
7	9.3	1.9	10.6	2.8	10.1	2.0	9.6	1.9
8	9.2	1.6	10.6	2.5	10.1	1.5	10.0	2.5
9	9.3	2.2	10.4	2.1	10.1	1.8	9.7	2.1
10	9.5	2.1	10.6	2.2	8.7	0.8	9.5	2.0
11	9.8	1.8	11.1	2.4	9.0	2.1	9.7	2.1
12	9.9	2.1	11.0	2.4	8.5	0.7	9.5	2.2
13	9.8	2.8	11.2	2.5	8.7	2.3	9.8	2.8
14	9.4	2.0	10.8	2.0	8.8	2.0	9.8	2.2
15	9.4	1.9	9.9	1.7	8.8	2.4	9.9	2.7
16	9.7	1.9	9.8	0.7	9.1	2.3	9.8	2.0
17	10.0	2.1	9.7	2.3	9.2	2.0	9.9	2.3
18	10.4	1.6	10.0	2.2	8.8	1.7	9.6	2.1
19	8.8	0.5	9.9	2.1	9.1	1.9	10.0	2.1
20	8.5	1.4	10.1	2.2	9.3	2.3	9.8	2.3
21	8.5	1.5	10.5	2.2	9.3	1.9	10.1	2.3
22	9.3	2.0	10.7	2.5	9.4	2.2	10.3	2.2
23	9.2	2.3	10.7	2.2	9.2	1.6	10.0	2.4
24	9.2	2.0	10.8	2.2	9.3	2.0	10.1	2.4
25	9.6	2.2	11.1	2.5	9.2	2.2	10.8	2.5
26	9.8	2.3	11.1	2.2	9.5	1.8	10.9	2.1

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

GROUP NO. 4 - 50,000 PPM (CONTINUED)

TIME INTERVAL weeks	DOG NO. 14252 M WT. kg.	DOG NO. 14252 M FOOD kg/wk	DOG NO. 14256 M WT. kg.	DOG NO. 14256 M FOOD kg/wk	DOG NO. 14257 M WT. kg.	DOG NO. 14257 M FOOD kg/wk	DOG NO. 14258 M WT. kg.	DOG NO. 14258 M FOOD kg/wk
28	10.2	2.2	11.4	1.9	8.9	2.0	10.4	2.1
30	9.7	2.2	11.1	2.0	8.9	1.9	10.0	2.0
32	9.1	2.3	10.9	1.7	8.9	1.9	9.9	2.3
34	9.5	2.2	10.7	1.8	8.7	2.0	10.0	2.2
36	9.9	1.9	10.0	1.1	9.2	2.0	10.2	1.8
38	9.3	2.0	9.6	1.4	8.9	2.1	9.9	2.2
40	9.8	2.1	9.3	1.4	9.4	1.7	10.7	2.5
42	10.1	1.7	9.3	1.2	9.4	1.6	10.6	1.8
44	10.0	1.5	8.7	1.0	9.5	2.0	10.3	2.0
46	10.5	1.5	9.2	1.9	9.6	1.7	10.9	2.3
48	10.3	2.2	9.3	2.2	9.7	1.8	10.5	2.3
50	10.6	1.8	9.6	1.8	9.5	1.8	10.6	1.8
52	10.5	1.8	9.9	1.8	9.4	1.9	10.5	2.2
56	10.5	2.0	9.4	2.1	9.3	2.1	Sacrificed	
60	9.5	1.4	9.1	1.7	9.2	1.6		
64	8.2	1.4	9.3	2.0	8.7	1.9		
68	7.5	2.2	8.6	2.2	9.6	1.6		
72	8.2	2.1	8.8	2.2	9.1	2.1		
76	7.6	1.5	9.3	1.8	9.2	2.2		
80	9.8	3.4	10.4	4.0	10.0	3.0		
84	9.7	2.1	10.4	2.5	10.6	2.2		
88	10.4	1.8	10.8	2.2	10.6	2.0		
92	9.5	1.2	9.9	2.5	11.0	2.2		
96	9.9	1.6	10.7	1.6	11.1	1.8		
100	10.9	2.2	11.0	2.5	11.2	2.0		
104	10.5	1.9	11.2	2.4	11.2	2.0		
% of Change	19%		25%		5%			
Wt. Change, kg.	+1.7		+2.3		+0.6			
Average Food Consumption		1.90		2.28		2.05		

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 4 - 50,000 PPM (CONTINUED)							
	DOG NO. 14274 F		DOG NO. 14276 F		DOG NO. 14281 F		DOG NO. 14282 F	
	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk	WT. kg.	FOOD kg/wk
Initial	12.7		9.2		8.7		6.7	
1	12.1	1.3	9.1	2.0	8.1	1.1	6.6	1.6
2	12.2	1.8	9.0	1.7	7.9	1.6	6.5	1.6
3	11.9	2.2	9.4	1.8	7.8	1.7	7.0	1.8
4	12.5	2.8	9.3	2.1	8.0	1.7	6.9	1.7
5	12.6	2.0	9.0	1.8	7.9	2.4	7.1	1.7
6	12.5	2.7	9.3	1.9	8.1	2.0	7.0	1.6
7	12.4	2.2	9.4	2.0	8.3	2.0	7.4	2.2
8	12.6	2.5	9.6	2.3	8.5	1.8	7.5	1.8
9	13.0	2.7	9.8	2.0	8.1	1.7	7.5	1.6
10	13.0	2.7	9.8	1.8	7.9	1.7	7.4	1.5
11	12.6	2.6	9.6	1.9	8.0	1.9	7.6	1.7
12	12.5	2.1	9.2	2.1	7.7	1.5	7.4	1.7
13	13.0	2.7	9.6	2.3	8.1	2.3	7.6	1.8
14	12.7	2.6	9.5	2.4	8.1	2.0	7.1	1.8
15	12.5	2.1	9.4	2.1	8.1	2.1	6.6	0.8
16	12.5	2.2	9.4	2.3	8.2	2.1	6.6	0.7
17	12.1	2.7	9.4	1.9	8.1	2.2	6.4	0.8
18	12.2	2.3	9.1	1.5	8.0	1.9	6.3	1.3
19	12.4	2.1	9.1	1.6	8.3	2.0	6.4	1.2
20	12.2	2.3	9.1	1.8	8.0	1.8	6.3	1.1
21	12.2	2.3	9.6	2.0	8.3	1.3	6.4	1.4
22	12.2	2.2	9.5	2.0	8.1	2.0	6.5	1.4
23	12.4	2.4	9.5	2.1	8.2	1.8	6.6	1.8
24	12.4	2.2	9.6	2.0	8.2	1.8	7.0	2.1
25	13.0	2.9	9.3	2.0	8.3	2.2	6.9	1.8
26	13.0	2.2	9.3	2.0	8.4	1.8	6.9	1.5

Table No. 1 - Continued

RECEIVING X-5120 IN THE DIET DAILY FOR 52 WEEKS

TIME INTERVAL weeks	GROUP NO. 4 - 50,000 PPM (CONTINUED) DOG NO. 14274 F WT. kg.	FOOD kg/wk	DOG NO. 14276 F WT. kg.	FOOD kg/wk	DOG NO. 14281 F WT. kg.	FOOD kg/wk	DOG NO. 14282 F WT. kg.	FOOD kg/wk
28	12.5	1.8	9.1	1.6	8.1	2.1	6.3	1.3
30	11.6	2.2	9.2	2.0	8.1	1.9	6.5	2.3
32	11.5	2.3	9.2	1.8	8.0	2.2	6.5	2.0
34	11.5	2.0	9.7	2.3	8.3	2.1	6.5	1.6
36	12.4	3.4	9.7	1.8	8.3	1.8	6.0	1.0
38	12.5	3.2	9.3	2.2	8.1	2.2	6.2	1.9
40	13.0	2.3	9.7	1.9	8.4	2.5	6.1	1.6
42	13.5	2.7	10.0	2.0	8.3	1.1	5.8	0.9
44	13.3	2.0	9.8	2.1	8.2	1.8	6.4	1.6
46	13.6	2.4	10.0	1.8	7.9	1.2	6.2	*
48	13.5	2.1	9.2	1.5	7.9	1.4	6.5	1.7
50	13.5	2.1	9.2	1.5	8.5	2.1	7.0	1.9
52	13.6	2.2	9.4	1.8	8.6	2.0	6.4	1.7
56	13.4	2.1	9.2	2.0	Sacrificed		6.9	2.2
60	12.8	2.2	9.1	1.8			6.4	1.4
64	12.6	2.8	9.3	1.9			6.8	2.0
68	12.5	2.6	9.2	1.9			7.6	1.9
72	12.4	2.1	9.7	2.3			7.4	2.2
76	12.6	2.5	10.1	2.0			7.2	2.5
80	14.1	3.4	9.9	2.4			7.5	2.3
84	14.2	2.5	10.2	1.6			7.7	2.0
88	14.5	2.0	10.3	2.0			8.3	1.8
92	14.8	2.2	10.3	1.6			8.4	1.7
96	15.3	2.1	10.9	1.5			8.7	1.4
100	15.4	2.1	10.5	1.6			9.0	1.5
104	16.3	2.9	10.6	1.5			8.9	1.2
% of Change	28%		15%				32%	
Wt. Change, kg.	+3.6		+1.4				+2.2	
Average Food Consumption		2.42		1.85				1.85

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EUSIN %	BASO %
1	14116	M	50.0	17.7	7.04	11.0	0	1	59	34	3	3	0
1	14118	M	48.0	16.8	6.47	11.6	0	0	65	27	4	4	0
1	14239	M	55.0	18.7	7.46	12.7	0	0	67	27	2	4	0
1	14240	M	49.0	18.0	6.26	8.6	0	0	68	25	1	6	0
GROUP MEAN			50.5	17.8	6.81	11.0							
2	14241	M	53.0	18.7	6.96	10.8	0	1	73	24	2	0	0
2	14242	M	48.0	16.4	5.90	11.3	0	0	61	36	1	2	0
2	14243	M	50.0	17.5	7.02	14.8	0	0	54	39	3	4	0
2	14246	M	49.0	17.2	6.59	9.0	0	0	60	31	0	9	0
GROUP MEAN			50.0	17.5	6.62	11.5							
3	13988	M	53.0	18.7	7.23	9.0	0	0	57	35	2	6	0
3	14245	M	45.0	16.0	6.08	9.6	0	0	58	38	2	2	0
3	14249	M	52.0	18.2	7.90	11.5	0	0	64	32	2	2	0
3	14250	M	47.0	16.8	6.26	11.2	0	0	63	32	0	5	0
GROUP MEAN			49.3	17.4	6.87	10.3							
4	14252	M	46.0	16.4	6.58	15.7	0	2	75	18	4	1	0
4	14256	M	46.0	16.4	6.30	12.5	0	0	73	24	1	2	0
4	14257	M	45.0	16.0	6.36	8.9	0	0	71	27	1	1	0
4	14258	M	46.0	16.0	5.94	12.6	0	0	54	40	0	6	0
GROUP MEAN			45.8	16.2	6.30	12.4							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14116	M	48.0	17.0	6.78	8.0	0	5	59	35	1	0	0
1	14118	M	48.0	16.8	6.91	12.2	0	1	73	23	3	0	0
1	14239	M	52.0	18.0	7.14	9.8	0	1	53	43	1	2	0
1	14240	M	50.0	17.2	6.85	16.2	0	6	70	18	1	5	0
GROUP MEAN			49.5	17.3	6.92	11.6							
2	14241	M	52.0	18.5	7.62	13.2	0	0	62	33	0	5	0
2	14242	M	45.0	15.8	6.07	11.2	0	1	47	50	2	0	0
2	14243	M	51.0	18.0	7.10	13.1	0	2	57	33	3	5	0
2	14246	M	45.0	16.0	5.97	22.8	0	2	74	19	2	3	0
GROUP MEAN			48.3	17.1	6.69	15.1							
3	13245	M	41.0	14.0	5.66	13.0	0	0	59	30	3	8	0
3	13988	M	49.0	17.5	7.14	8.8	0	0	74	19	4	3	0
3	14249	M	47.0	16.2	7.33	12.1	0	0	57	39	1	3	0
3	14250	M	40.0	13.7	5.84	11.2	0	0	56	38	1	5	0
GROUP MEAN			44.3	15.4	6.49	11.3							
4	14252	M	42.0	14.4	6.30	18.1	0	4	80	14	2	0	0
4	14256	M	48.0	16.4	6.81	7.5	0	0	57	40	3	0	0
4	14257	M	46.0	15.8	6.60	9.3	0	0	64	29	2	5	0
4	14258	M	51.0	17.0	7.43	12.3	0	0	60	35	0	5	0
GROUP MEAN			46.8	15.9	6.79	11.8							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14116	M	47.0	16.2	6.46	8.0	0	4	57	34	2	3	0
1	14118	M	48.0	16.6	6.30	9.8	0	0	57	38	2	3	0
1	14239	M	54.0	18.7	7.60	9.2	0	0	59	35	2	3	1
1	14240	M	48.0	17.0	6.40	8.8	0	0	60	34	0	6	0
GROUP MEAN			49.3	17.1	6.69	9.0							
2	14241	M	54.0	18.9	7.31	11.3	0	1	46	41	3	9	0
2	14242	M	36.0	12.6	4.91	8.5	0	0	48	51	0	1	0
2	14243	M	47.0	16.4	6.46	12.7	0	0	51	37	1	11	0
2	14246	M	42.0	14.4	5.53	12.9	0	0	54	37	0	9	0
GROUP MEAN			44.8	15.6	6.05	11.4							
3	13988	M	47.0	16.6	6.26	7.4	0	1	57	36	1	5	0
3	14245	M	40.0	13.7	5.48	11.8	0	0	64	34	0	2	0
3	14249	M	45.0	15.5	6.33	11.2	0	0	49	45	1	5	0
3	14250	M	35.0	12.0	4.80	8.5	0	1	48	41	3	7	0
GROUP MEAN			41.8	14.5	5.72	9.7							
4	14252	M	42.0	14.2	5.56	14.6	0	1	66	26	5	2	0
4	14256	M	44.0	15.5	6.19	6.9	0	2	61	34	0	3	0
4	14257	M	44.0	15.3	5.47	9.8	0	0	68	27	3	2	0
4	14258	M	50.0	17.0	6.41	11.5	0	0	62	31	2	5	0
GROUP MEAN			45.0	15.5	5.91	10.7							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14116	M	44.0	15.0	6.01	9.0	0	2	54	41	1	2	0
1	14118	M	46.0	15.5	5.82	9.5	0	1	58	35	2	4	0
1	14239	M	50.0	17.0	6.78	10.6	0	0	63	30	3	4	0
1	14240	M	46.0	16.0	6.06	8.9	0	2	58	32	2	6	0
GROUP MEAN			46.5	15.9	6.17	9.5							
2	14241	M	49.0	17.0	6.04	7.3	0	0	47	40	3	10	0
2	14242	M	38.0	12.6	5.13	12.3	0	0	52	38	6	4	0
2	14243	M	42.0	15.5	5.50	12.3	0	0	41	52	1	6	0
2	14246	M	46.0	15.5	6.32	17.3	0	0	68	27	0	5	0
GROUP MEAN			43.8	15.2	5.75	12.3							
3	13988	M	40.0	13.4	5.63	8.8	0	0	59	36	1	4	0
3	14245	M	35.0	11.7	4.80	10.8	0	1	57	27	10	5	0
3	14249	M	43.0	14.6	6.35	11.9	0	2	47	42	5	4	0
3	14250	M	30.0	10.2	4.01	8.0	0	1	47	44	2	6	0
GROUP MEAN			37.0	12.5	5.20	9.9							
4	14252	M	47.0	16.4	6.44	7.0	0	0	50	43	1	6	0
4	14256	M	42.0	14.2	5.65	13.3	0	0	66	32	0	2	0
4	14257	M	45.0	15.3	5.94	7.0	0	0	75	25	0	0	0
4	14258	M	45.0	15.0	6.06	12.1	0	0	50	38	0	11	1
GROUP MEAN			44.8	15.2	6.02	9.9							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14116	M	34.5	11.8	4.91	9.0	0	1	59	29	8	3	0
1	14118	M	48.0	15.9	5.95	11.1	0	1	61	35	2	1	0
1	14239	M	49.0	15.9	6.33	10.3	0	0	63	37	0	0	0
1	14240	M	47.0	15.9	5.89	10.7	0	0	66	33	0	1	0
GROUP MEAN			44.6	14.9	5.77	10.3							
2	14241	M	46.0	15.4	5.65	8.8	0	0	54	39	6	1	0
2	14242	M	38.0	11.9	4.69	13.6	0	0	57	36	7	0	0
2	14243	M	39.5	13.4	5.32	16.7	0	2	61	33	2	2	0
2	14246	M	45.0	15.0	5.83	12.2	0	0	61	31	6	2	0
GROUP MEAN			42.1	13.9	5.37	12.8							
3	13988	M	43.0	15.6	5.54	9.7	0	2	62	29	6	1	0
3	14245	M	41.0	14.6	5.46	11.2	0	1	69	26	4	0	0
3	14249	M	44.0	15.4	6.06	13.4	0	2	55	35	5	3	0
3	14250	M	36.5	12.9	4.56	15.1	0	0	64	29	5	2	0
GROUP MEAN			41.1	14.6	5.41	12.4							
4	14252	M	43.5	15.6	6.00	13.1	0	0	79	12	8	1	0
4	14256	M	45.0	16.3	6.12	7.5	0	0	65	21	14	0	0
4	14257	M	45.0	16.1	5.76	7.8	1	0	65	32	2	0	0
4	14258	M	42.5	14.6	5.18	11.6	0	0	67	32	1	0	0
GROUP MEAN			44.0	15.7	5.77	10.0							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14116	M	37.0	13.6	5.18	4.7	0	8	52	36	2	2	0
1	14118	M	44.0	15.4	6.41	9.4	0	1	63	23	3	10	0
1	14240	M	44.0	16.1	6.04	9.4	0	0	57	36	1	6	0
GROUP MEAN			41.7	15.0	5.21	7.8							
2	14242	M	37.0	13.6	4.56	10.6	0	1	69	30	0	0	0
2	14243	M	43.0	14.6	5.56	16.0	0	1	61	28	4	6	0
2	14246	M	43.0	15.9	5.56	11.3	0	0	55	40	1	4	0
GROUP MEAN			41.0	14.7	5.23	12.6							
3	13988	M	44.0	15.0	5.08	10.7	0	0	60	33	0	7	0
3	14245	M	35.0	12.1	4.56	9.8	0	1	61	29	0	9	0
3	14249	M	48.0	16.3	6.02	11.2	0	3	52	40	2	2	0
GROUP MEAN			42.3	14.5	5.22	10.6							
4	14252	M	40.0	13.4	5.02	9.7	0	0	49	47	2	2	0
4	14256	M	46.0	15.6	5.90	7.8	0	0	66	27	4	3	0
4	14257	M	44.0	15.2	5.30	7.9	0	0	57	38	0	5	0
GROUP MEAN			43.3	14.7	6.41	8.5							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14116	M	48.0	16.7	6.81	8.2	0	0	53	44	1	2	0
1	14118	M	53.0	18.4	7.03	8.7	0	0	61	34	0	4	1
1	14240	M	51.0	18.2	6.32	9.6	0	0	52	43	2	3	0
GROUP MEAN			50.7	17.8	6.72	8.8							
2	14242	M	47.0	16.3	6.04	8.7	0	0	52	45	1	2	0
2	14243	M	55.0	19.2	7.31	13.3	0	0	63	32	1	4	0
2	14246	M	51.0	17.7	6.77	9.1	0	0	58	38	1	3	0
GROUP MEAN			51.0	17.7	6.71	10.4							
3	13988	M	48.5	16.9	6.25	9.0	0	0	66	31	0	3	0
3	14245	M	39.0	13.6	5.23	12.1	0	0	72	25	0	3	0
3	14249	M	52.0	17.9	7.19	8.6	0	0	63	33	1	3	0
GROUP MEAN			46.5	16.1	6.22	9.9							
4	14252	M	51.0	18.2	6.53	8.3	0	0	54	40	3	3	0
4	14256	M	51.0	17.7	6.98	7.7	0	0	71	21	1	7	0
4	14257	M	46.5	16.3	5.94	9.6	0	0	70	30	0	0	0
GROUP MEAN			49.5	17.4	6.48	8.5							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14199	F	51.0	17.2	6.91	14.7	0	0	63	30	1	6	0
1	14209	F	52.0	17.7	7.14	11.3	0	0	76	17	2	5	0
1	14219	F	43.0	14.8	5.81	14.2	0	0	70	29	0	1	0
1	14220	F	49.0	16.8	6.45	9.8	0	0	61	32	1	6	0
GROUP MEAN			48.8	16.6	6.58	12.5							
2	14231	F	53.0	18.5	7.46	11.4	0	0	68	25	1	6	0
2	14336	F	44.0	15.3	6.08	11.5	0	1	45	50	0	4	0
2	14337	F	49.0	16.6	6.84	14.0	0	0	37	60	1	2	0
2	14338	F	46.0	15.5	6.38	13.3	0	0	60	38	2	0	0
GROUP MEAN			48.0	16.5	6.69	12.6							
3	14331	F	52.0	18.0	7.19	8.4	0	1	50	41	3	5	0
3	14332	F	40.0	14.2	5.60	8.2	0	0	49	48	2	1	0
3	14334	F	49.0	16.6	6.87	16.9	0	0	66	32	0	2	0
3	14335	F	52.0	17.7	7.32	18.3	0	0	52	47	0	1	0
GROUP MEAN			48.3	16.6	6.75	13.0							
4	14274	F	49.0	16.8	6.32	12.4	0	0	64	33	0	3	0
4	14276	F	50.0	17.7	7.23	12.1	0	0	65	32	0	3	0
4	14281	F	50.0	17.2	6.88	9.8	0	1	75	23	0	1	0
4	14282	F	46.0	15.3	6.44	12.7	0	0	49	45	1	5	0
GROUP MEAN			48.8	16.8	6.72	11.8							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14199	F	55.0	18.9	7.52	14.1	0	1	64	28	1	6	0
1	14200	F	45.0	16.0	5.93	10.7	0	1	69	25	0	5	0
1	14209	F	53.0	18.7	7.63	10.5	0	0	71	25	3	1	0
1	14219	F	43.0	15.5	5.61	14.0	0	0	74	18	0	8	0
GROUP MEAN			49.0	17.3	6.67	12.3							
2	14231	F	49.0	17.2	7.19	9.0	0	0	58	34	4	4	0
2	14336	F	50.0	17.7	7.26	10.4	0	3	67	19	8	3	0
2	14337	F	47.0	16.8	6.71	10.4	0	1	63	32	3	1	0
2	14338	F	52.0	18.0	7.47	11.7	0	0	65	30	1	4	0
GROUP MEAN			49.5	17.4	7.16	10.4							
3	14331	F	53.0	18.5	7.43	9.3	0	0	61	35	0	4	0
3	14332	F	45.0	15.5	6.23	12.7	0	3	64	31	1	1	0
3	14334	F	55.0	18.7	7.87	8.9	0	0	58	41	0	1	0
3	14335	F	51.0	17.5	7.33	10.3	0	0	60	34	3	3	0
GROUP MEAN			51.0	17.6	7.22	10.3							
4	14274	F	47.0	16.4	6.45	11.3	0	0	43	51	2	4	0
4	14276	F	48.0	16.6	7.00	13.2	0	0	67	31	1	1	0
4	14281	F	47.0	15.3	6.48	9.3	0	0	62	33	1	4	0
4	14282	F	51.0	17.0	7.20	13.2	0	0	46	44	0	10	0
GROUP MEAN			48.3	16.3	6.78	11.8							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14199	F	46.0	15.8	5.95	15.7	0	1	61	31	2	5	0
1	14209	F	50.0	17.5	6.35	10.7	0	0	52	34	0	14	0
1	14219	F	49.0	17.0	6.17	11.5	0	0	62	29	2	7	0
1	14220	F	45.0	16.2	5.88	11.6	0	0	54	23	3	20	0
GROUP MEAN			47.5	16.6	6.09	12.4							
2	14231	F	42.0	15.0	5.75	12.3	0	0	69	24	1	6	0
2	14336	F	48.0	16.8	6.53	11.9	0	0	59	32	1	8	0
2	14337	F	47.0	16.4	6.26	8.3	0	0	58	39	2	1	0
2	14338	F	51.0	17.7	6.89	11.4	0	0	57	36	1	6	0
GROUP MEAN			47.0	16.5	6.36	11.0							
3	14331	F	53.0	18.2	7.16	11.2	0	2	56	32	3	7	0
3	14332	F	46.0	16.0	6.17	9.1	0	0	62	33	0	5	0
3	14334	F	55.0	18.5	7.48	10.6	0	0	63	30	3	4	0
3	14335	F	49.0	17.0	6.63	9.6	0	0	49	45	2	4	0
GROUP MEAN			50.8	17.4	6.86	10.1							
4	14274	F	49.0	17.2	6.12	12.6	0	0	62	36	1	1	0
4	14276	F	48.0	16.6	6.26	14.9	0	0	77	21	1	1	0
4	14281	F	47.0	16.0	6.25	11.4	0	0	74	22	1	3	0
4	14282	F	51.0	17.5	6.73	17.9	0	1	55	30	3	11	0
GROUP MEAN			48.8	16.8	6.34	14.2							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14199	F	47.0	15.8	6.28	13.4	0	0	47	43	0	10	0
1	14209	F	49.0	16.8	6.58	13.1	0	1	65	27	3	4	0
1	14219	F	40.0	13.7	5.15	13.2	0	1	67	23	2	7	0
1	14220	F	46.0	16.0	6.10	10.6	0	0	47	40	2	11	0
GROUP MEAN			45.5	15.6	6.03	12.6							
2	14231	F	53.0	17.0	7.93	10.7	0	0	69	27	1	3	0
2	14336	F	46.0	15.8	6.07	9.5	0	1	55	34	1	9	0
2	14337	F	50.0	16.4	6.57	18.1	0	0	77	22	0	1	0
2	14338	F	45.0	15.5	6.33	11.1	0	0	64	31	2	3	0
GROUP MEAN			48.5	16.2	6.73	12.4							
3	14331	F	48.0	16.2	6.85	14.0	0	0	65	23	3	9	0
3	14332	F	40.0	14.2	5.56	9.6	0	1	68	27	4	0	0
3	14334	F	51.0	17.2	6.47	10.6	0	0	52	38	2	8	0
3	14335	F	46.0	16.0	6.10	12.2	0	1	63	30	3	3	0
GROUP MEAN			46.3	15.9	6.25	11.6							
4	14274	F	48.0	16.8	6.44	11.4	0	0	44	52	0	4	0
4	14276	F	50.0	17.0	6.73	14.0	0	3	64	19	1	13	0
4	14281	F	48.0	16.4	6.26	9.4	0	0	69	25	1	5	0
4	14282	F	45.0	15.3	6.03	11.2	0	1	41	53	0	5	0
GROUP MEAN			47.8	16.4	6.37	11.5							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14199	F	45.0	15.5	5.75	10.7	0	1	54	38	4	3	0
1	14209	F	45.0	15.2	6.13	12.1	0	0	51	48	1	0	0
1	14219	F	44.5	15.0	5.72	12.5	0	0	56	36	6	2	0
1	14220	F	41.0	13.6	5.02	11.7	0	3	59	29	7	2	0
GROUP MEAN			43.9	14.8	5.66	11.8							
2	14231	F	47.0	16.3	5.80	13.1	0	0	77	23	0	0	0
2	14336	F	46.0	15.6	5.69	10.5	0	0	50	43	6	1	0
2	14337	F	50.0	17.5	6.30	10.3	0	0	65	32	3	0	0
2	14338	F	50.0	17.2	6.39	12.1	0	0	63	33	2	2	0
GROUP MEAN			48.3	16.7	6.05	11.5							
3	14331	F	49.5	17.7	6.74	9.5	0	0	65	33	2	0	0
3	14332	F	44.0	15.9	5.53	12.3	0	0	70	30	0	0	0
3	14334	F	52.5	18.9	7.03	11.6	0	1	59	38	2	0	0
3	14335	F	45.5	16.5	6.06	9.3	0	1	71	22	6	0	0
GROUP MEAN			47.9	17.3	6.34	10.7							
4	14274	F	51.0	18.2	6.31	12.3	0	2	63	27	8	0	0
4	14276	F	48.0	17.2	6.10	15.1	1	0	69	21	9	0	0
4	14281	F	47.5	16.7	5.95	8.6	0	0	64	26	4	6	0
4	14282	F	45.0	15.6	5.90	12.7	0	0	61	27	7	5	0
GROUP MEAN			47.9	16.9	6.07	12.2							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14199	F	54.0	19.2	6.32	12.1	0	0	60	32	1	7	0
1	14219	F	47.0	16.9	5.82	12.4	0	0	63	32	0	5	0
1	14220	F	44.0	15.4	4.65	9.0	0	1	43	42	7	7	0
GROUP MEAN			48.3	17.2	5.60	11.2							
2	14336	F	45.0	15.9	6.53	12.1	0	3	47	38	1	11	0
2	14337	F	47.0	17.2	6.22	8.2	0	0	55	40	2	3	0
2	14338	F	51.0	17.7	6.52	11.2	0	0	61	38	0	1	0
GROUP MEAN			47.7	16.9	6.09	10.5							
3	14331	F	49.0	16.7	6.07	8.2	0	1	56	40	1	2	0
3	14332	F	42.0	14.6	4.86	10.8	0	1	57	39	1	2	0
3	14335	F	46.0	15.4	5.75	8.9	0	0	58	37	3	2	0
GROUP MEAN			45.7	15.6	6.56	9.3							
4	14274	F	50.0	17.7	6.13	10.9	0	0	59	35	4	2	0
4	14276	F	43.0	15.2	5.48	12.9	0	0	58	36	1	5	0
4	14282	F	41.0	13.8	5.30	15.4	0	1	56	34	3	6	0
GROUP MEAN			44.7	15.6	5.64	13.1							

TABLE NO. 2 - INDIVIDUAL HEMATOLOGICAL VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	HCT %	HGB GM%	RBC MILLS	WBC THS	DIFFERENTIAL META %	BAND %	SEG %	LYMPH %	MONO %	EOSIN %	BASO %
1	14199	F	63.0	21.4	7.38	7.4	0	0	55	40	0	4	1
1	14219	F	52.0	18.2	6.78	8.2	0	0	62	34	0	4	0
1	14220	F	51.0	17.9	6.40	9.6	0	0	62	36	0	2	0
GROUP MEAN			55.3	19.2	6.85	8.4							
2	14336	F	49.0	17.2	6.59	8.2	0	0	51	40	3	6	0
2	14337	F	45.5	16.1	5.91	7.3	0	0	57	39	1	3	0
2	14338	F	43.0	15.2	5.76	8.3	0	0	65	27	2	5	1
GROUP MEAN			45.8	16.2	6.09	7.9							
3	14331	F	53.0	18.7	6.80	7.7	0	0	65	27	2	6	0
3	14332	F	45.0	15.9	5.66	8.7	0	0	50	42	2	6	0
3	14335	F	42.0	14.6	5.27	9.0	0	0	61	39	0	0	0
GROUP MEAN			46.7	16.4	5.91	8.5							
4	14274	F	53.0	18.7	6.36	9.3	0	0	53	40	3	4	0
4	14276	F	45.0	15.9	6.03	11.9	0	0	58	37	0	5	0
4	14282	F	44.0	15.2	5.68	9.4	0	0	49	43	2	6	0
GROUP MEAN			47.3	16.6	6.02	10.2							

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14116	M	119.0	15.0	32.5	10.0	0.30	29.0	0.28
1	14118	M	110.0	11.0	26.0	13.6	0.20	29.0	0.27
1	14239	M	92.0	17.5	37.5	12.8	0.30	33.0	0.30
1	14240	M	106.0	10.0	31.0	9.0	0.20	29.0	0.25
GROUP MEAN			106.8	13.4	31.8	11.4	0.25	30.0	0.28
2	14241	M	125.0	11.5	37.5	12.4	0.21	33.0	0.33
2	14242	M	125.0	11.5	29.0	14.1	0.30	31.0	0.34
2	14243	M	98.0	9.0	31.0	10.1	0.29	35.0	0.31
2	14246	M	91.0	6.0	25.0	11.0	0.21	33.0	0.28
GROUP MEAN			109.8	9.5	30.6	11.9	0.25	33.0	0.32
3	13988	M	105.0	16.0	34.0	11.0	0.21	23.0	0.46
3	14245	M	103.0	10.0	34.0	10.6	0.28	37.0	0.45
3	14249	M	110.0	15.0	36.0	11.1	0.29	52.0	0.32
3	14250	M	126.0	9.0	25.0	18.2	0.30	44.0	0.29
GROUP MEAN			111.0	12.5	32.3	12.7	0.27	39.0	0.38
4	14252	M	113.0	11.5	32.5	10.8	0.30	35.0	0.26
4	14256	M	120.0	9.0	32.5	6.5	0.29	55.0	0.39
4	14257	M	120.0	11.0	31.0	10.5	0.22	57.0	0.30
4	14258	M	101.0	11.0	26.0	13.1	0.21	51.0	0.25
GROUP MEAN			113.5	10.6	30.5	10.7	0.26	49.5	0.30

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS
1	14116	M	120.0	17.5	32.5	10.0	0.20	15.0
1	14118	M	110.0	10.0	32.5	9.9	0.18	13.0
1	14239	M	126.0	15.0	44.0	9.5	0.28	20.0
1	14240	M	124.0	11.0	28.0	6.9	0.18	14.0
GROUP MEAN			120.0	13.4	34.3	9.1	0.21	15.5
2	14241	M	114.0	16.0	44.0	8.3	0.22	18.0
2	14242	M	115.0	14.5	39.0	18.7	0.20	19.0
2	14243	M	107.0	9.0	37.5	10.0	0.19	13.0
2	14246	M	98.0	10.0	26.0	8.9	0.13	14.0
GROUP MEAN			108.5	12.4	36.6	11.5	0.19	16.0
3	13245	M	110.0	9.0	31.0	9.1	0.14	17.0
3	13988	M	110.0	18.5	37.5	11.6	0.20	17.0
3	14249	M	110.0	15.5	39.0	10.0	0.18	31.0
3	14250	M	109.0	14.0	28.0	12.9	0.14	27.0
GROUP MEAN			109.8	14.3	33.9	10.9	0.17	23.0
4	14252	M	105.0	10.0	36.0	9.1	0.18	22.0
4	14256	M	120.0	9.0	31.0	9.8	0.21	28.0
4	14257	M	110.0	11.0	37.5	7.9	0.17	30.0
4	14258	M	98.0	12.0	28.0	13.1	0.21	30.0
GROUP MEAN			108.3	10.5	33.1	10.0	0.19	27.5

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14116	M	130.0	12.0	31.0	8.0	0.35	29.0	4.30
1	14118	M	105.0	12.0	32.5	8.1	0.21	29.0	1.40
1	14239	M	106.0	12.0	31.0	6.9	0.22	30.0	2.60
1	14240	M	98.0	12.0	25.0	5.2	0.21	31.0	3.40
GROUP MEAN			109.8	12.0	29.9	7.1	0.25	29.8	2.93
2	14241	M	109.0	15.0	37.5	8.0	0.60	34.0	2.80
2	14242	M	111.0	12.0	37.5	9.8	0.31	33.0	2.70
2	14243	M	96.0	10.0	34.0	6.2	0.29	31.0	2.60
2	14246	M	90.0	9.0	23.0	6.8	0.21	36.0	2.30
GROUP MEAN			101.5	11.5	33.0	7.7	0.35	33.5	2.60
3	13988	M	93.0	12.5	34.0	6.1	0.25	37.0	2.30
3	14245	M	98.0	13.0	31.0	6.9	0.21	42.0	2.40
3	14249	M	99.0	19.0	34.0	8.6	0.35	54.0	2.60
3	14250	M	93.0	12.0	29.0	7.3	0.24	45.0	2.50
GROUP MEAN			95.8	14.1	32.0	7.2	0.26	44.5	2.45
4	14252	M	89.0	13.0	28.0	6.8	0.25	41.0	1.90
4	14256	M	96.0	10.0	29.0	6.0	0.30	48.0	2.30
4	14257	M	79.0	16.0	36.0	6.0	0.29	47.0	2.20
4	14258	M	74.0	19.0	25.0	9.9	0.31	50.0	2.80
GROUP MEAN			84.5	14.5	29.5	7.2	0.29	46.5	2.30

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14116	M	117.0	17.5	37.5	9.6	0.39	37.0	3.10
1	14118	M	100.0	11.5	32.5	7.9	0.32	42.0	2.90
1	14239	M	106.0	15.0	32.5	5.6	0.38	43.0	2.90
1	14240	M	122.0	10.0	29.0	5.3	0.40	40.0	3.40
GROUP MEAN			111.3	13.5	32.9	7.1	0.37	40.5	3.08
2	14241	M	100.0	16.0	34.0	8.0	0.49	45.0	3.50
2	14242	M	110.0	13.0	73.0	11.8	0.39	48.0	2.90
2	14243	M	102.0	12.0	37.5	7.0	0.40	47.0	3.30
2	14246	M	110.0	9.0	26.0	6.9	0.40	45.0	2.80
GROUP MEAN			105.5	12.5	42.6	8.4	0.42	46.3	3.13
3	13988	M	113.0	14.0	39.0	9.6	0.40	43.0	3.20
3	14245	M	94.0	15.0	29.0	6.8	0.49	48.0	3.40
3	14249	M	106.0	15.0	32.5	6.5	0.41	45.0	2.80
3	14250	M	108.0	12.5	28.0	8.1	0.40	49.0	2.50
GROUP MEAN			105.3	14.1	32.1	7.8	0.43	46.3	2.98
4	14252	M	106.0	9.0	31.0	6.8	0.40	42.0	4.10
4	14256	M	118.0	8.0	31.0	6.1	0.49	44.0	4.30
4	14257	M	106.0	13.0	32.5	7.8	0.49	45.0	2.20
4	14258	M	93.0	10.0	26.0	9.1	0.60	46.0	2.50
GROUP MEAN			105.8	10.0	30.1	7.5	0.50	44.3	3.28

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14116	M	93.0	17.0	41.0	14.0	0.30	33.0	3.40
1	14118	M	80.0	21.0	35.0	7.0	0.52	50.0	2.90
1	14239	M	71.0	15.0	32.0	4.5	0.29	36.0	2.60
1	14240	M	80.0	12.0	29.0	4.6	0.29	34.0	3.20
GROUP MEAN			81.0	16.3	34.3	7.5	0.35	38.3	3.03
2	14241	M	72.0	17.5	36.0	6.5	0.30	35.0	3.60
2	14242	M	88.0	14.0	31.0	6.8	0.39	37.0	4.10
2	14243	M	85.0	13.5	32.0	5.0	0.39	37.0	3.80
2	14246	M	90.0	8.0	27.0	6.1	0.31	37.0	3.50
GROUP MEAN			83.8	13.3	31.5	6.1	0.35	36.5	3.75
3	13988	M	91.0	13.0	39.0	5.8	0.35	45.0	4.00
3	14245	M	76.0	11.0	35.0	4.6	0.30	45.0	3.50
3	14249	M	98.0	13.0	35.0	6.8	0.40	52.0	3.70
3	14250	M	89.0	14.0	28.0	8.1	0.60	50.0	5.10
GROUP MEAN			88.5	12.8	34.3	6.3	0.41	48.0	4.08
4	14252	M	105.0	10.0	35.0	4.5	0.30	46.0	4.30
4	14256	M	95.0	10.0	29.0	4.2	0.39	49.0	3.50
4	14257	M	94.0	18.0	36.0	5.0	0.40	49.0	3.10
4	14258	M	86.0	14.0	27.0	7.0	0.40	50.0	2.90
GROUP MEAN			95.0	13.0	31.8	5.2	0.37	48.5	3.45

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14116	M	93.0	16.5	60.0	7.2	0.29	44.0	4.60
1	14118	M	85.0	18.0	35.0	7.1	0.31	36.0	3.30
1	14240	M	84.0	13.5	27.0	4.2	0.35	37.0	3.60
GROUP MEAN			87.3	16.0	40.7	6.2	0.32	39.0	3.83
2	14242	M	67.0	24.0	27.0	7.4	0.43	37.0	3.30
2	14243	M	62.0	18.0	31.0	4.8	0.39	36.0	3.90
2	14246	M	82.0	12.0	29.0	6.6	0.35	44.0	4.00
GROUP MEAN			70.3	18.0	29.0	6.3	0.39	39.0	3.73
3	13988	M	80.0	19.0	34.0	7.8	0.39	43.0	4.30
3	14245	M	70.0	11.0	31.0	5.1	0.30	48.0	3.70
3	14249	M	69.0	25.0	29.0	6.8	0.31	43.0	4.70
GROUP MEAN			73.0	18.3	31.3	6.6	0.33	44.7	4.23
4	14252	M	74.0	14.0	25.0	4.2	0.45	47.0	3.60
4	14256	M	81.0	10.5	28.0	4.0	0.41	45.0	3.70
4	14257	M	81.0	18.0	35.0	5.1	0.40	51.0	3.50
GROUP MEAN			78.7	14.2	29.3	4.4	0.42	47.7	3.60

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14116	M	85.0	14.0	31.0	7.9	0.30	37.0	2.70
1	14118	M	78.0	12.0	34.0	7.1	0.29	32.0	2.20
1	14240	M	89.0	10.5	31.0	4.5	0.29	31.0	2.90
GROUP MEAN			84.0	12.2	32.0	6.5	0.29	33.3	2.60
2	14242	M	82.0	11.0	38.0	6.8	0.29	31.0	3.20
2	14243	M	72.0	11.0	31.0	5.5	0.31	33.0	2.50
2	14246	M	76.0	9.0	34.0	5.5	0.22	38.0	2.80
GROUP MEAN			76.7	10.3	34.3	5.9	0.27	34.0	2.83
3	13988	M	85.0	15.0	35.0	11.8	0.29	41.0	3.30
3	14245	M	70.0	9.0	36.0	14.0	0.18	49.0	2.70
3	14249	M	74.0	14.0	38.0	6.0	0.21	47.0	2.50
GROUP MEAN			76.3	12.7	36.3	10.6	0.23	45.7	2.83
4	14252	M	101.0	9.0	39.0	6.0	0.30	48.0	3.00
4	14256	M	83.0	10.0	34.0	3.9	0.21	48.0	2.80
4	14257	M	76.0	12.0	42.0	5.1	0.29	56.0	2.40
GROUP MEAN			86.7	10.3	38.3	5.0	0.27	50.7	2.73

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14116	M	146.0	5.00	112.5	11.8	23.7
1	14118	M	145.0	4.50	111.5	11.2	23.3
1	14239	M	147.5	6.20	114.0	12.1	24.0
1	14240	M	144.0	4.80	113.0	11.1	23.8
GROUP MEAN			145.6	5.13	112.8	11.6	23.7
2	14241	M	147.5	5.70	110.0	11.5	24.1
2	14242	M	150.0	5.20	112.0	12.0	21.5
2	14243	M	147.0	4.40	109.0	11.4	23.2
2	14246	M	146.0	4.20	109.0	11.1	24.0
GROUP MEAN			147.6	4.88	110.0	11.5	23.2
3	13988	M	145.5	4.20	114.0	10.9	22.8
3	14245	M	147.0	5.00	113.0	11.4	23.2
3	14249	M	147.0	4.50	113.0	11.8	23.0
3	14250	M	147.0	4.40	109.0	11.1	24.0
GROUP MEAN			146.6	4.53	112.3	11.3	23.3
4	14252	M	146.0	4.50	112.0	10.8	19.8
4	14256	M	147.0	4.40	112.0	12.1	23.1
4	14257	M	146.0	4.10	111.0	11.1	23.7
4	14258	M	145.5	4.10	111.0	11.1	23.3
GROUP MEAN			146.1	4.28	111.5	11.3	22.5

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14116	M	148.0	4.90	112.5	11.7	25.3
1	14118	M	147.5	4.85	113.5	11.1	24.6
1	14239	M	147.0	5.10	113.0	11.7	24.0
1	14240	M	146.5	4.60	114.0	11.2	23.0
GROUP MEAN			147.3	4.86	113.3	11.4	24.2
2	14241	M	147.0	4.50	113.0	11.4	24.1
2	14242	M	147.5	5.45	109.5	11.6	27.0
2	14243	M	146.0	4.60	110.0	11.1	25.3
2	14246	M	147.0	3.85	110.0	10.6	25.0
GROUP MEAN			146.9	4.60	110.6	11.2	25.4
3	13245	M	147.0	5.10	113.0	11.0	24.2
3	13988	M	147.0	4.30	112.5	11.1	24.4
3	14249	M	149.0	4.50	115.0	10.8	21.9
3	14250	M	149.5	4.30	113.5	10.6	23.5
GROUP MEAN			148.1	4.55	113.5	10.9	23.5
4	14252	M	145.0	4.00	112.0	10.5	21.5
4	14256	M	146.5	4.60	113.0	10.9	22.0
4	14257	M	148.0	5.30	115.5	10.8	21.5
4	14258	M	149.0	4.80	112.5	10.0	21.0
GROUP MEAN			147.1	4.68	113.3	10.6	21.5

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14116	M	145.0	4.25	113.0	10.6	22.8
1	14118	M	142.0	4.70	112.0	10.5	22.8
1	14239	M	141.0	4.60	112.0	11.0	22.1
1	14240	M	142.0	5.10	115.0	11.0	19.7
GROUP MEAN			142.5	4.66	113.0	10.8	21.9
2	14241	M	141.5	4.20	114.0	11.1	18.8
2	14242	M	146.0	4.70	112.0	10.7	23.5
2	14243	M	147.0	4.80	113.0	10.8	22.9
2	14246	M	145.0	4.60	111.0	10.6	24.8
GROUP MEAN			144.9	4.58	112.5	10.8	22.5
3	13988	M	144.0	4.60	113.0	10.5	24.0
3	14245	M	145.0	4.80	113.0	10.8	23.2
3	14249	M	147.0	4.80	112.0	10.7	21.8
3	14250	M	146.5	5.20	112.0	10.1	25.4
GROUP MEAN			145.6	4.85	112.5	10.5	23.6
4	14252	M	144.0	4.50	112.5	10.5	21.2
4	14256	M	145.0	4.90	113.5	10.4	21.1
4	14257	M	145.0	4.80	114.0	10.5	21.1
4	14258	M	148.0	5.15	111.5	11.0	22.4
GROUP MEAN			145.5	4.84	112.9	10.6	21.5

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14116	M	148.0	4.70	112.0	10.5	26.0
1	14118	M	150.0	4.85	115.0	10.5	24.6
1	14239	M	148.0	4.80	112.0	11.0	26.0
1	14240	M	144.0	4.45	111.0	9.9	22.9
GROUP MEAN			147.5	4.70	112.5	10.5	24.9
2	14241	M	150.0	4.60	114.0	10.6	25.2
2	14242	M	146.0	5.30	111.0	10.3	32.0
2	14243	M	146.5	4.75	114.0	10.1	26.8
2	14246	M	147.0	4.35	111.0	10.6	26.1
GROUP MEAN			147.4	4.80	112.5	10.4	27.5
3	13988	M	138.0	4.20	107.0	9.4	23.6
3	14245	M	136.5	4.40	101.0	10.6	25.1
3	14249	M	145.0	4.40	113.5	10.4	24.1
3	14250	M	139.0	4.40	106.0	9.2	26.1
GROUP MEAN			139.6	4.35	106.9	9.9	24.7
4	14252	M	134.0	4.00	103.0	9.5	23.5
4	14256	M	145.0	4.60	113.0	10.8	24.5
4	14257	M	147.0	4.30	117.0	10.4	23.8
4	14258	M	147.0	4.45	113.0	10.5	25.1
GROUP MEAN			143.3	4.34	111.5	10.3	24.2

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14116	M	146.0	4.90	115.0	9.7	25.6
1	14118	M	149.0	4.95	119.0	10.6	22.0
1	14239	M	148.0	4.60	117.0	10.3	24.8
1	14240	M	146.0	5.15	117.0	10.2	23.0
GROUP MEAN			147.3	4.90	117.0	10.2	23.9
2	14241	M	147.0	4.75	115.0	10.1	25.7
2	14242	M	146.0	4.80	116.0	10.2	24.8
2	14243	M	145.0	4.60	117.5	9.9	25.0
2	14246	M	146.0	4.70	117.5	10.1	24.2
GROUP MEAN			146.0	4.71	116.5	10.1	24.9
3	13988	M	146.0	4.50	118.0	9.9	24.1
3	14245	M	148.0	5.00	119.0	10.3	23.9
3	14249	M	147.0	4.70	115.0	10.0	23.9
3	14250	M	147.0	4.50	116.0	9.8	26.1
GROUP MEAN			147.0	4.68	117.0	10.0	24.5
4	14252	M	149.0	4.35	119.5	10.2	21.4
4	14256	M	149.0	4.80	119.0	10.3	22.0
4	14257	M	150.0	4.50	122.0	10.3	20.9
4	14258	M	151.0	4.20	120.0	10.4	24.8
GROUP MEAN			149.8	4.46	120.1	10.3	22.3

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14116	M	148.0	4.65	117.0	9.1	24.8
1	14118	M	153.0	4.70	119.0	9.8	23.8
1	14240	M	149.0	4.85	119.0	10.1	23.4
GROUP MEAN			150.0	4.73	118.3	9.7	24.0
2	14242	M	151.0	4.85	120.0	10.3	25.1
2	14243	M	149.0	4.40	119.0	9.8	25.2
2	14246	M	147.5	4.75	118.0	10.0	24.5
GROUP MEAN			149.2	4.67	119.0	10.0	24.9
3	13988	M	147.5	4.40	120.0	9.9	23.9
3	14245	M	147.5	5.05	115.0	9.6	26.0
3	14249	M	148.0	4.10	120.0	10.2	23.9
GROUP MEAN			147.7	4.52	118.3	9.9	24.6
4	14252	M	148.0	4.70	118.0	9.5	23.8
4	14256	M	148.0	4.80	118.0	10.2	22.8
4	14257	M	149.0	4.35	120.0	9.7	22.5
GROUP MEAN			148.3	4.62	118.7	9.8	23.0

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14116	M	148.0	4.50	113.0	10.6	25.0
1	14118	M	148.0	4.70	114.0	10.0	22.0
1	14240	M	148.0	4.80	113.5	10.2	23.0
GROUP MEAN			148.0	4.67	113.5	10.3	23.3
2	14242	M	148.0	4.70	116.0	10.5	23.9
2	14243	M	148.0	4.60	117.0	10.3	23.0
2	14246	M	149.0	4.50	116.0	10.3	24.0
GROUP MEAN			148.3	4.60	116.3	10.4	23.6
3	13988	M	146.0	4.50	111.0	10.3	23.6
3	14245	M	146.0	5.00	113.0	9.8	24.9
3	14249	M	146.0	4.40	114.0	10.4	24.1
GROUP MEAN			146.0	4.63	112.7	10.2	24.2
4	14252	M	146.0	4.90	111.0	10.0	22.5
4	14256	M	147.0	5.30	113.0	10.3	22.9
4	14257	M	146.0	4.75	113.0	9.9	23.5
GROUP MEAN			146.3	4.98	112.3	10.1	23.0

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14116	M	6.15	48.0	13.3	10.0	18.7	10.0	2.91
1	14118	M	6.40	42.6	13.6	11.1	21.6	11.1	2.70
1	14239	M	6.69	42.2	14.3	9.7	22.1	11.7	2.90
1	14240	M	6.20	44.4	13.8	10.0	19.4	12.5	2.75
GROUP MEAN			6.36	44.3	13.8	10.2	20.5	11.3	2.82
2	14241	M	6.30	47.1	12.1	10.7	21.4	8.6	2.71
2	14242	M	6.61	45.7	12.1	10.7	20.0	11.4	2.80
2	14243	M	6.10	41.1	14.4	11.6	21.9	11.0	2.71
2	14246	M	6.40	48.1	13.6	8.0	21.6	8.6	3.00
GROUP MEAN			6.35	45.5	13.1	10.3	21.2	9.9	2.81
3	13988	M	6.45	41.7	11.9	10.6	25.2	10.6	2.55
3	14245	M	5.99	52.1	12.7	8.5	17.6	9.1	3.00
3	14249	M	6.35	42.7	14.6	8.5	22.0	12.2	2.89
3	14250	M	6.40	43.6	13.4	10.1	24.2	8.7	2.99
GROUP MEAN			6.30	45.0	13.2	9.4	22.3	10.2	2.86
4	14252	M	6.70	44.2	13.0	12.3	16.7	13.8	2.95
4	14256	M	7.11	56.5	12.9	8.1	10.5	12.1	3.09
4	14257	M	6.28	43.3	12.6	9.8	20.3	9.1	3.20
4	14258	M	6.19	43.4	12.3	11.5	21.3	11.5	2.50
GROUP MEAN			6.57	48.1	12.7	10.4	17.2	11.6	2.94

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	TOTAL ALBUMIN G%
1	14116	M	6.00	2.85
1	14118	M	6.20	2.45
1	14239	M	6.55	2.60
1	14240	M	6.25	2.70
GROUP MEAN			6.25	2.65
2	14241	M	6.30	2.60
2	14242	M	6.60	2.70
2	14243	M	6.40	2.65
2	14246	M	5.40	2.70
GROUP MEAN			6.18	2.66
3	13245	M	5.65	2.80
3	13988	M	6.45	2.60
3	14249	M	6.50	2.90
3	14250	M	6.05	3.00
GROUP MEAN			6.16	2.83
4	14252	M	6.60	3.05
4	14256	M	6.90	3.35
4	14257	M	6.45	3.80
4	14258	M	6.45	3.15
GROUP MEAN			6.60	3.34

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14116	M	6.01	55.0	2.9	10.7	23.5	8.2	2.90
1	14118	M	6.09	44.5	2.8	12.3	29.0	8.9	2.40
1	14239	M	6.29	49.5	3.1	6.9	30.0	7.5	2.59
1	14240	M	6.39	46.5	4.0	11.7	29.5	6.4	2.69
GROUP MEAN			6.20	48.9	3.2	10.4	28.0	7.8	2.65
2	14241	M	6.50	51.5	2.4	7.5	29.5	10.3	3.00
2	14242	M	6.11	56.0	3.6	7.7	26.5	6.5	2.60
2	14243	M	5.98	51.0	2.3	7.3	29.5	8.4	2.50
2	14246	M	6.00	50.5	1.7	10.2	22.5	13.0	2.49
GROUP MEAN			6.15	52.3	2.5	8.2	27.0	9.6	2.65
3	13988	M	6.10	51.5	2.3	15.0	23.5	6.0	2.40
3	14245	M	6.20	48.5	2.0	11.5	26.5	9.9	2.75
3	14249	M	6.50	46.0	3.5	7.2	31.0	9.5	2.60
3	14250	M	5.60	53.0	3.8	12.3	20.5	8.9	2.35
GROUP MEAN			6.10	49.8	2.9	11.5	25.4	8.6	2.53
4	14252	M	7.19	38.0	1.8	8.6	29.0	23.0	2.60
4	14256	M	7.19	49.0	2.1	9.2	25.0	14.0	3.20
4	14257	M	6.69	47.5	3.9	9.2	27.5	11.9	2.91
4	14258	M	5.90	51.0	4.1	12.0	24.5	7.3	2.51
GROUP MEAN			6.74	46.4	3.0	9.8	26.5	14.1	2.81

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14116	M	5.70	44.0	4.1	9.2	31.0	9.7	3.25
1	14118	M	6.10	45.0	4.6	11.6	23.0	14.4	3.10
1	14239	M	6.30	51.5	4.2	10.8	24.0	9.1	3.15
1	14240	M	6.10	46.0	3.4	12.4	28.5	8.9	3.20
GROUP MEAN			6.05	46.6	4.1	11.0	26.6	10.5	3.18
2	14241	M	6.10	53.0	4.2	10.4	25.0	8.8	3.30
2	14242	M	5.70	49.0	4.2	10.1	28.0	8.6	2.81
2	14243	M	5.61	50.0	4.5	10.0	28.0	8.6	2.90
2	14246	M	6.01	51.5	4.5	11.3	28.5	6.0	3.29
GROUP MEAN			5.86	50.9	4.4	10.5	27.4	8.0	3.08
3	13988	M	5.50	48.5	4.0	7.3	34.0	8.3	2.71
3	14245	M	5.35	52.5	4.2	7.8	25.5	10.2	2.95
3	14249	M	6.12	47.5	5.2	9.8	28.0	9.8	3.01
3	14250	M	5.10	52.0	5.2	11.6	24.0	8.4	2.71
GROUP MEAN			5.52	50.1	4.7	9.1	27.9	9.2	2.85
4	14252	M	6.80	48.0	4.1	10.9	28.5	9.4	3.20
4	14256	M	6.80	52.5	4.2	13.3	24.5	7.2	3.85
4	14257	M	6.50	40.0	4.2	8.2	26.0	22.5	3.80
4	14258	M	6.01	54.5	4.7	10.3	23.0	9.7	3.40
GROUP MEAN			6.53	48.8	4.3	10.7	25.5	12.2	3.56

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14116	M	5.30	48.0	4.0	13.4	26.0	10.3	2.36
1	14118	M	6.15	44.0	4.5	12.1	30.0	11.3	2.69
1	14239	M	6.09	44.0	4.0	14.7	27.0	11.5	2.40
1	14240	M	6.29	44.0	3.9	9.5	23.0	19.3	2.60
GROUP MEAN			5.96	45.0	4.1	12.4	26.5	13.1	2.51
2	14241	M	5.80	50.0	3.8	10.3	29.0	7.0	2.70
2	14242	M	5.80	46.0	5.1	10.2	28.0	11.0	2.60
2	14243	M	5.60	48.0	4.8	9.3	29.0	8.6	2.49
2	14246	M	5.80	51.0	5.2	9.9	27.0	7.4	2.41
GROUP MEAN			5.75	48.8	4.7	9.9	28.3	8.5	2.55
3	13988	M	5.80	47.0	5.5	7.9	31.0	10.4	2.61
3	14245	M	6.20	47.0	4.7	7.4	31.0	11.0	2.89
3	14249	M	6.19	41.0	7.1	8.3	32.0	12.7	2.51
3	14250	M	5.71	47.0	5.5	10.0	27.0	12.0	2.51
GROUP MEAN			5.98	45.5	5.7	8.4	30.3	11.5	2.63
4	14252	M	6.60	44.0	4.4	8.8	23.0	19.3	3.31
4	14256	M	6.50	49.0	4.6	8.5	25.0	13.8	3.11
4	14257	M	6.19	49.0	4.7	10.5	24.0	11.7	3.60
4	14258	M	5.69	48.0	5.6	12.8	25.0	10.5	2.89
GROUP MEAN			6.25	47.5	4.8	10.2	24.3	13.8	3.23

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14116	M	5.00	56.0	3.0	9.0	23.0	9.0	2.30
1	14118	M	5.25	43.0	4.0	13.0	29.5	9.5	2.20
1	14240	M	5.75	45.0	6.0	9.0	28.0	12.0	2.50
GROUP MEAN			5.33	48.0	4.3	10.3	26.8	10.2	2.33
2	14242	M	6.25	41.0	4.0	11.0	32.0	12.0	2.50
2	14243	M	5.90	42.0	5.0	13.0	30.0	10.0	2.30
2	14246	M	6.20	50.5	4.5	8.5	29.5	7.0	2.70
GROUP MEAN			6.12	44.5	4.5	10.8	30.5	9.7	2.50
3	13988	M	6.30	45.5	4.5	7.5	32.5	10.0	2.45
3	14245	M	6.00	51.5	3.5	8.5	27.5	9.0	2.61
3	14249	M	6.29	46.0	4.0	8.0	31.0	11.0	2.49
GROUP MEAN			6.20	47.7	4.0	8.0	30.3	10.0	2.52
4	14252	M	6.60	31.0	5.0	8.0	27.0	29.0	2.12
4	14256	M	6.60	41.5	4.5	9.0	28.0	17.0	2.60
4	14257	M	6.10	45.0	5.0	8.0	32.0	10.0	3.10
GROUP MEAN			6.43	39.2	4.8	8.3	29.0	18.7	2.61

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14116	M	5.81	53.0	5.0	10.5	26.0	5.5	2.91
1	14118	M	6.00	46.0	5.0	11.5	28.5	9.0	2.70
1	14240	M	6.12	47.5	5.5	10.5	27.0	9.5	2.70
GROUP MEAN			5.98	48.8	5.2	10.8	27.2	8.0	2.77
2	14242	M	6.20	49.0	4.0	10.5	28.5	8.0	2.86
2	14243	M	6.81	43.0	3.5	11.0	32.5	10.0	2.75
2	14246	M	6.00	55.0	3.0	9.0	27.5	5.5	2.90
GROUP MEAN			6.34	49.0	3.5	10.2	29.5	7.8	2.84
3	13988	M	6.80	41.0	4.0	9.0	36.0	10.0	2.56
3	14245	M	6.21	44.0	4.5	6.5	36.5	8.5	2.40
3	14249	M	6.35	44.5	5.5	8.0	32.0	10.0	2.61
GROUP MEAN			6.45	43.2	4.7	7.8	34.8	9.5	2.52
4	14252	M	6.30	52.0	3.0	8.0	25.0	12.0	3.40
4	14256	M	6.90	48.0	4.5	7.5	30.5	9.5	3.00
4	14257	M	6.12	51.5	3.0	7.0	29.5	9.0	3.29
GROUP MEAN			6.44	50.5	3.5	7.5	28.3	10.2	3.23

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14199	F	103.0	11.0	22.0	10.9	0.15	16.0	0.20
1	14209	F	92.0	12.0	26.0	9.1	0.19	16.5	0.19
1	14219	F	109.0	16.0	28.0	9.2	0.15	16.0	0.23
1	14220	F	91.0	13.5	22.0	6.4	0.19	13.0	0.29
GROUP MEAN			98.8	13.1	24.5	8.9	0.17	15.4	0.23
2	14231	F	100.0	11.0	28.0	9.4	0.20	13.0	0.23
2	14336	F	116.0	9.0	25.0	9.3	0.18	16.0	0.33
2	14337	F	107.0	13.0	23.0	11.5	0.18	16.0	0.23
2	14338	F	116.0	11.5	28.0	14.5	0.21	17.0	0.30
GROUP MEAN			109.8	11.1	26.0	11.2	0.19	15.5	0.27
3	14331	F	102.0	9.5	22.0	9.1	0.14	19.0	0.41
3	14332	F	111.0	10.5	28.0	18.3	0.13	18.5	0.24
3	14334	F	120.0	9.0	28.0	21.5	0.18	18.5	0.42
3	14335	F	95.0	9.5	23.0	14.2	0.19	35.0	0.41
GROUP MEAN			107.0	9.6	25.3	15.8	0.16	22.8	0.37
4	14274	F	120.0	8.0	26.0	13.2	0.19	16.5	0.32
4	14276	F	110.0	11.0	28.0	10.9	0.20	15.0	0.27
4	14281	F	101.0	12.0	26.0	8.8	0.19	14.0	0.28
4	14282	F	95.0	10.5	22.0	13.0	0.10	17.0	0.22
GROUP MEAN			106.5	10.4	25.5	11.5	0.17	15.6	0.27

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS
1	14199	F	105.0	15.0	37.5	8.8	0.20	26.0
1	14200	F	103.0	14.0	31.0	6.3	0.13	17.0
1	14209	F	101.0	12.0	32.5	7.4	0.25	21.0
1	14219	F	122.0	11.0	32.5	9.2	0.17	13.0
GROUP MEAN			107.8	13.0	33.4	7.9	0.19	19.3
2	14231	F	105.0	22.0	34.0	7.9	0.20	13.0
2	14336	F	105.0	9.0	34.0	11.9	0.30	25.0
2	14337	F	110.0	12.0	36.0	10.3	0.20	17.0
2	14338	F	106.0	16.0	32.5	12.1	0.22	29.0
GROUP MEAN			106.5	14.8	34.1	10.6	0.23	21.0
3	14331	F	106.0	12.0	34.0	6.9	0.20	25.0
3	14332	F	115.0	14.0	34.0	19.4	0.19	40.0
3	14334	F	116.0	10.5	41.0	18.0	0.18	32.0
3	14335	F	106.0	11.0	37.5	11.8	0.21	30.0
GROUP MEAN			110.8	11.9	36.6	14.0	0.20	31.8
4	14274	F	108.0	14.5	44.0	12.9	0.20	32.0
4	14276	F	110.0	11.5	34.0	9.4	0.20	22.0
4	14281	F	110.0	12.5	36.0	7.0	0.20	24.0
4	14282	F	103.0	12.0	34.0	12.8	0.18	33.0
GROUP MEAN			107.8	12.6	37.0	10.5	0.20	27.8

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14199	F	86.0	15.0	48.0	6.9	0.29	41.0	3.50
1	14209	F	91.0	14.0	39.0	7.0	0.29	59.0	2.70
1	14219	F	95.0	15.0	31.0	10.5	0.26	30.0	2.50
1	14220	F	85.0	15.5	25.0	6.9	0.29	33.0	2.40
GROUP MEAN			89.3	14.9	35.8	7.8	0.28	40.8	2.78
2	14231	F	81.0	17.0	29.0	6.9	0.29	38.0	2.60
2	14336	F	85.0	11.0	26.0	7.0	0.31	50.0	2.90
2	14337	F	94.0	16.0	34.0	6.9	0.30	42.0	2.80
2	14338	F	77.0	13.0	25.0	7.1	0.25	38.0	2.30
GROUP MEAN			84.3	14.3	28.5	7.0	0.29	42.0	2.65
3	14331	F	90.0	14.0	29.0	5.8	0.29	43.0	2.30
3	14332	F	95.0	19.0	32.5	12.5	0.29	50.0	2.60
3	14334	F	99.0	13.0	34.0	10.9	0.29	43.0	1.60
3	14335	F	89.0	13.0	34.0	9.2	0.29	44.0	2.10
GROUP MEAN			93.3	14.8	32.4	9.6	0.29	45.0	2.15
4	14274	F	75.0	14.0	34.0	8.1	0.28	56.0	2.60
4	14276	F	95.0	14.0	31.0	6.8	0.29	52.0	2.60
4	14281	F	69.0	15.0	37.5	7.1	0.30	51.0	3.20
4	14282	F	81.0	13.0	28.0	10.7	0.30	53.0	3.40
GROUP MEAN			80.0	14.0	32.6	8.2	0.29	53.0	2.95

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14119	F	100.0	18.0	28.0	11.0	0.50	47.0	3.50
1	14209	F	85.0	12.5	31.0	7.5	0.60	61.0	3.30
1	14219	F	121.0	15.5	28.0	11.1	0.42	42.0	4.90
1	14220	F	93.0	17.0	25.0	7.0	0.43	40.0	3.50
GROUP MEAN			99.8	15.8	28.0	9.2	0.49	47.5	3.80
2	14231	F	108.0	14.0	29.0	8.5	0.45	46.0	3.00
2	14336	F	113.0	12.0	29.0	7.2	0.50	39.0	3.30
2	14337	F	92.0	11.5	37.5	10.0	0.45	43.0	3.00
2	14338	F	100.0	13.0	29.0	8.1	0.46	46.0	3.40
GROUP MEAN			103.3	12.6	31.1	8.5	0.47	43.5	3.18
3	14331	F	100.0	12.0	28.0	6.2	0.48	46.0	2.60
3	14332	F	106.0	14.0	28.0	12.8	0.49	54.0	2.50
3	14334	F	115.0	14.0	32.5	11.6	0.51	45.0	4.70
3	14335	F	101.0	10.0	34.0	10.2	0.49	43.0	3.70
GROUP MEAN			105.5	12.5	30.6	10.2	0.49	47.0	3.38
4	14274	F	100.0	12.0	34.0	9.2	0.50	52.0	3.30
4	14276	F	105.0	12.0	31.0	8.9	0.50	47.0	3.20
4	14281	F	94.0	12.0	31.0	7.2	0.49	47.0	1.90
4	14282	F	90.0	11.0	29.0	6.9	0.48	50.0	2.50
GROUP MEAN			97.3	11.8	31.3	8.1	0.49	49.0	2.73

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14199	F	80.0	19.0	46.0	8.0	0.25	42.0	5.00
1	14209	F	62.0	14.5	31.0	7.8	0.22	42.0	3.80
1	14219	F	75.0	19.0	29.0	9.3	0.30	38.0	5.70
1	14220	F	71.0	19.0	27.0	6.7	0.30	35.0	5.40
GROUP MEAN			72.0	17.9	33.3	8.0	0.27	39.3	4.98
2	14231	F	70.0	17.5	31.0	6.9	0.40	39.0	4.40
2	14336	F	85.0	12.0	28.0	6.0	0.49	36.0	5.20
2	14337	F	90.0	14.5	36.0	5.8	0.41	41.0	3.60
2	14338	F	85.0	11.0	28.0	5.1	0.29	43.0	4.20
GROUP MEAN			82.5	13.8	30.8	6.0	0.40	39.8	4.35
3	14331	F	76.0	11.5	31.0	4.0	0.40	44.0	3.70
3	14332	F	85.0	18.0	31.0	9.2	0.31	53.0	5.30
3	14334	F	104.0	13.0	32.0	8.1	0.31	49.0	6.00
3	14335	F	91.0	13.0	35.0	6.0	0.39	43.0	5.20
GROUP MEAN			89.0	13.9	32.3	6.8	0.35	47.3	5.05
4	14274	F	80.0	11.0	36.0	9.0	0.40	52.0	4.30
4	14276	F	83.0	12.0	39.0	7.1	0.53	52.0	3.00
4	14281	F	76.0	11.5	35.0	5.5	0.40	50.0	4.60
4	14282	F	70.0	11.0	28.0	7.0	0.40	60.0	2.70
GROUP MEAN			77.3	11.4	34.5	7.2	0.43	53.5	3.65

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14I99	F	70.0	12.5	47.0	6.8	0.50	37.0	3.80
1	14219	F	77.0	17.0	29.0	7.2	0.49	36.0	4.40
1	14220	F	76.0	14.0	25.0	5.1	0.35	37.0	7.00
GROUP MEAN			74.3	14.5	33.7	6.4	0.45	36.7	5.07
2	14336	F	70.0	13.0	25.0	11.8	0.43	39.0	4.60
2	14337	F	75.0	12.0	29.0	6.2	0.42	37.0	3.40
2	14338	F	72.0	15.5	29.0	6.8	0.35	39.0	4.00
GROUP MEAN			72.3	13.5	27.7	8.3	0.40	38.3	4.00
3	14331	F	74.0	12.0	28.0	4.6	0.40	37.0	4.60
3	14332	F	80.0	12.0	34.0	9.0	0.35	40.0	4.00
3	14335	F	88.0	12.0	29.0	7.9	0.70	43.0	4.10
GROUP MEAN			80.7	12.0	30.3	7.2	0.48	40.0	4.23
4	14274	F	76.0	16.0	28.0	8.5	0.60	45.0	5.20
4	14276	F	80.0	17.5	27.0	9.5	0.42	39.0	6.80
4	14282	F	71.0	12.0	34.0	7.0	0.40	46.0	3.70
GROUP MEAN			75.7	15.2	29.7	8.3	0.47	43.3	5.23

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	GLUCOSE MG%	BUN MG%	SGPT R-F.	ALK.PHOS K-A.UNITS	BILIRUBIN TOTAL MG%	SGOT K.UNITS	BSP RET %,30 MIN
1	14199	F	90.0	11.0	29.0	7.0	0.32	33.0	2.40
1	14219	F	86.0	9.5	31.0	6.9	0.30	30.0	3.70
1	14220	F	79.0	10.0	34.0	7.0	0.29	30.0	4.50
GROUP MEAN			85.0	10.2	31.3	7.0	0.30	31.0	3.53
2	14336	F	86.0	10.0	29.0	8.0	0.30	39.0	0.90
2	14337	F	84.0	15.5	34.0	10.2	0.21	37.0	3.80
2	14338	F	90.0	10.0	28.0	7.8	0.21	35.0	4.80
GROUP MEAN			86.7	11.8	30.3	8.7	0.24	37.0	3.17
3	14331	F	80.0	12.0	25.0	4.4	0.29	39.0	3.60
3	14332	F	84.0	14.0	29.0	6.2	0.20	44.0	4.40
3	14335	F	75.0	12.0	34.0	9.4	0.21	42.0	3.90
GROUP MEAN			79.7	12.7	29.3	6.7	0.23	41.7	3.97
4	14274	F	85.0	10.0	32.0	8.4	0.29	49.0	4.40
4	14276	F	76.0	11.0	35.0	8.5	0.21	49.0	3.90
4	14282	F	80.0	10.0	31.0	12.1	0.21	48.0	4.00
GROUP MEAN			80.3	10.3	32.7	9.7	0.24	48.7	4.10

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14199	F	146.0	4.65	111.0	10.7	23.8
1	14209	F	145.0	4.35	109.0	11.2	23.6
1	14219	F	148.0	4.85	112.0	11.0	23.9
1	14220	F	147.0	4.60	112.0	11.3	24.2
GROUP MEAN			146.5	4.61	111.0	11.1	23.9
2	14231	F	147.0	4.40	111.0	11.3	23.9
2	14336	F	145.5	4.15	110.5	11.3	22.0
2	14337	F	146.0	4.40	108.5	11.6	22.4
2	14338	F	145.0	4.30	107.0	11.4	23.2
GROUP MEAN			145.9	4.31	109.3	11.4	22.9
3	14331	F	146.0	4.90	109.0	11.7	24.8
3	14332	F	143.5	4.30	108.0	11.6	24.1
3	14334	F	147.0	4.70	109.0	11.5	25.0
3	14335	F	147.5	4.00	109.5	11.5	22.8
GROUP MEAN			146.0	4.48	108.9	11.6	24.2
4	14274	F	148.0	4.60	111.0	11.2	22.8
4	14276	F	147.0	4.50	110.0	11.6	24.7
4	14281	F	147.5	4.95	111.0	11.2	23.9
4	14282	F	146.0	4.90	109.0	11.3	24.9
GROUP MEAN			147.1	4.74	110.3	11.3	24.1

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14199	F	148.0	4.40	112.5	10.9	25.4
1	14200	F	145.0	4.15	113.0	11.2	25.2
1	14209	F	147.0	4.20	112.0	11.2	23.9
1	14219	F	147.0	4.75	115.0	11.1	23.0
GROUP MEAN			146.8	4.38	113.1	11.1	24.4
2	14231	F	147.0	4.35	112.0	11.3	25.4
2	14336	F	147.0	4.45	110.0	11.2	23.9
2	14337	F	147.0	4.35	111.5	11.2	24.7
2	14338	F	146.0	4.55	109.0	11.3	23.8
GROUP MEAN			146.8	4.43	110.6	11.3	24.5
3	14331	F	148.0	5.15	113.0	11.4	23.5
3	14332	F	148.5	4.45	114.0	11.2	22.8
3	14334	F	144.5	4.95	111.5	10.8	24.0
3	14335	F	148.0	4.50	115.0	10.9	21.6
GROUP MEAN			147.3	4.76	113.4	11.1	23.0
4	14274	F	148.0	4.75	112.5	10.7	21.0
4	14276	F	149.0	4.55	114.5	11.3	21.5
4	14281	F	147.0	5.20	112.0	10.6	24.1
4	14282	F	148.0	5.95	113.0	11.3	23.2
GROUP MEAN			148.0	5.11	113.0	11.0	22.5

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14199	F	142.0	4.70	115.0	10.0	20.9
1	14209	F	141.5	4.30	115.0	10.7	20.0
1	14219	F	141.0	4.40	115.0	11.0	19.6
1	14220	F	140.0	4.40	114.0	10.8	21.0
GROUP MEAN			141.1	4.45	114.8	10.6	20.4
2	14231	F	148.0	4.70	113.0	10.7	24.1
2	14336	F	144.5	4.60	113.0	10.9	22.1
2	14337	F	145.0	4.50	111.5	11.0	21.5
2	14338	F	145.0	4.70	111.0	11.4	22.8
GROUP MEAN			145.6	4.63	112.1	11.0	22.6
3	14331	F	148.0	5.15	112.5	11.8	23.1
3	14332	F	149.0	4.60	115.0	11.4	23.5
3	14334	F	147.0	5.10	113.0	11.1	23.1
3	14335	F	147.5	4.80	114.0	10.9	21.9
GROUP MEAN			147.9	4.91	113.6	11.3	22.9
4	14274	F	148.0	5.10	114.0	11.0	20.8
4	14276	F	149.0	5.20	114.0	10.8	20.2
4	14281	F	148.0	5.20	111.0	10.7	22.6
4	14282	F	150.5	5.40	111.5	11.4	21.2
GROUP MEAN			148.9	5.23	112.6	11.0	21.2

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14119	F	144.0	4.85	109.0	9.7	25.3
1	14209	F	148.0	4.60	112.5	10.3	23.3
1	14219	F	148.0	5.10	116.0	10.5	23.9
1	14220	F	143.0	4.30	111.0	10.2	25.8
GROUP MEAN			145.8	4.71	112.1	10.2	24.6
2	14231	F	151.0	4.45	116.5	11.0	25.2
2	14336	F	145.0	4.55	110.0	10.4	24.0
2	14337	F	150.0	4.39	114.0	10.8	22.9
2	14338	F	145.0	4.70	108.5	10.7	24.2
GROUP MEAN			147.8	4.52	112.3	10.7	24.1
3	14331	F	148.0	4.70	112.5	11.0	24.0
3	14332	F	143.0	3.95	108.0	10.0	24.2
3	14334	F	143.5	4.70	111.0	10.7	26.5
3	14335	F	145.0	4.30	114.0	10.3	25.0
GROUP MEAN			144.9	4.41	111.4	10.5	24.9
4	14274	F	144.0	4.65	111.0	10.6	24.1
4	14276	F	145.0	4.65	115.0	10.6	22.2
4	14281	F	142.5	4.50	108.0	9.8	24.5
4	14282	F	142.0	4.75	110.0	9.9	25.2
GROUP MEAN			143.4	4.64	111.0	10.2	24.0

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14199	F	146.0	5.00	115.0	10.4	25.0
1	14209	F	147.0	4.55	117.5	10.1	23.3
1	14219	F	147.0	4.65	119.0	10.4	23.6
1	14220	F	145.0	4.75	118.0	10.5	22.8
GROUP MEAN			146.3	4.74	117.4	10.4	23.7
2	14231	F	149.0	4.50	117.0	10.4	24.1
2	14336	F	146.0	4.70	119.0	10.5	23.3
2	14337	F	147.0	4.40	118.0	10.7	20.1
2	14338	F	146.0	4.60	116.0	11.0	23.9
GROUP MEAN			147.0	4.55	117.5	10.7	22.9
3	14331	F	148.0	4.90	116.0	10.8	24.2
3	14332	F	150.0	4.40	122.0	10.7	22.5
3	14334	F	150.0	4.45	118.5	10.6	24.1
3	14335	F	150.0	4.60	123.0	10.7	21.5
GROUP MEAN			149.5	4.59	119.9	10.7	23.1
4	14274	F	147.0	4.80	116.5	10.5	21.9
4	14276	F	150.0	5.05	120.0	10.7	20.4
4	14281	F	147.0	4.95	115.5	10.2	22.8
4	14282	F	148.0	4.80	114.0	10.4	24.2
GROUP MEAN			148.0	4.90	116.5	10.5	22.3

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14199	F	148.0	4.65	116.0	10.1	24.6
1	14219	F	151.0	4.25	119.0	10.2	24.0
1	14220	F	149.0	4.60	115.5	10.4	24.8
GROUP MEAN			149.3	4.50	116.8	10.2	24.5
2	14336	F	147.5	4.80	117.0	10.4	23.8
2	14337	F	149.0	4.40	118.5	10.4	24.6
2	14338	F	150.0	4.60	115.0	10.7	25.9
GROUP MEAN			148.8	4.60	116.8	10.5	24.8
3	14331	F	147.0	4.85	114.0	10.7	26.5
3	14332	F	148.0	4.40	116.0	10.2	28.1
3	14335	F	146.0	4.70	116.0	10.4	24.0
GROUP MEAN			147.0	4.65	115.3	10.4	26.2
4	14274	F	148.0	4.30	118.0	10.1	22.9
4	14276	F	149.0	4.50	118.0	10.5	21.6
4	14282	F	147.0	5.20	116.0	10.1	23.9
GROUP MEAN			148.0	4.67	117.3	10.2	22.8

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	SERUM SODIUM MEQ/L	SERUM POTASSIUM MEQ/L	SERUM CHLORIDE MEQ/L	SERUM CALCIUM MG%	CO2 MEQ/L
1	14199	F	148.0	4.40	112.0	10.7	23.6
1	14219	F	147.0	4.70	112.0	10.6	23.9
1	14220	F	149.0	4.30	112.0	11.0	26.0
GROUP MEAN			148.0	4.47	112.0	10.8	24.5
2	14336	F	145.0	5.00	111.0	10.5	23.9
2	14337	F	147.0	4.45	112.0	10.6	25.0
2	14338	F	144.0	4.40	108.0	10.6	25.6
GROUP MEAN			145.3	4.62	110.3	10.6	24.8
3	14331	F	145.0	4.50	110.0	10.9	25.0
3	14332	F	147.0	4.20	112.0	10.7	25.9
3	14335	F	147.0	4.40	110.0	10.7	25.9
GROUP MEAN			146.3	4.37	110.7	10.8	25.6
4	14274	F	147.0	4.80	114.0	10.3	23.0
4	14276	F	146.0	5.30	113.0	10.5	22.8
4	14282	F	145.0	4.95	108.5	10.4	25.1
GROUP MEAN			146.0	5.02	111.8	10.4	23.6

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14199	F	5.61	46.0	10.6	11.5	23.0	8.8	2.81
1	14209	F	6.85	42.1	9.4	9.4	28.3	10.7	2.61
1	14219	F	6.60	40.5	13.3	8.9	25.9	11.4	2.56
1	14220	F	6.29	50.0	10.0	7.9	21.4	10.7	3.11
GROUP MEAN			6.34	44.7	10.8	9.4	24.7	10.4	2.78
2	14231	F	6.21	51.4	10.0	8.6	20.0	10.0	2.95
2	14336	F	6.00	50.7	5.3	12.5	22.4	9.2	2.62
2	14337	F	6.40	49.4	4.5	12.8	24.4	9.0	4.10
2	14338	F	6.00	53.1	5.3	13.3	19.5	8.8	2.65
GROUP MEAN			6.15	51.2	6.3	11.8	21.6	9.3	3.08
3	14331	F	6.18	51.8	12.9	9.4	20.8	5.0	3.78
3	14332	F	6.00	46.9	12.3	11.5	22.3	6.9	2.35
3	14334	F	6.10	48.8	5.8	12.4	24.0	9.1	2.60
3	14335	F	6.20	50.0	6.2	12.3	23.1	8.5	3.95
GROUP MEAN			6.12	49.4	9.3	11.4	22.6	7.4	3.17
4	14274	F	6.60	46.4	12.1	8.6	22.1	10.7	2.70
4	14276	F	6.30	51.2	13.2	9.1	20.7	5.8	3.12
4	14281	F	6.50	50.0	10.7	8.6	22.1	8.6	3.21
4	14282	F	6.49	46.2	12.1	9.0	24.2	7.6	3.05
GROUP MEAN			6.47	48.5	12.0	9.0	22.3	8.2	3.02

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	TOTAL ALBUMIN G%
1	14199	F	5.80	2.90
1	14200	F	6.60	3.35
1	14209	F	7.30	2.95
1	14219	F	6.80	2.95
GROUP MEAN			6.63	3.04
2	14231	F	6.20	3.00
2	14336	F	6.10	3.15
2	14337	F	5.60	4.40
2	14338	F	5.70	3.15
GROUP MEAN			5.90	3.43
3	14331	F	6.40	4.80
3	14332	F	6.40	3.55
3	14334	F	5.80	3.20
3	14335	F	6.05	4.50
GROUP MEAN			6.16	4.01
4	14274	F	6.55	3.15
4	14276	F	6.25	3.60
4	14281	F	6.65	3.70
4	14282	F	6.65	4.10
GROUP MEAN			6.53	3.64

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14119	F	5.15	50.0	5.0	14.4	21.5	8.8	2.90
1	14209	F	7.10	40.5	3.5	10.6	31.5	11.2	3.30
1	14219	F	6.40	50.0	4.6	9.7	29.5	6.2	3.45
1	14220	F	6.20	52.0	3.8	10.7	23.0	11.4	3.80
GROUP MEAN			6.21	48.1	4.2	11.4	26.4	9.4	3.36
2	14231	F	6.50	55.0	4.5	5.8	28.5	7.4	3.60
2	14336	F	5.71	54.0	5.5	9.2	24.0	7.0	3.71
2	14337	F	6.30	54.0	3.9	10.1	28.0	5.8	4.45
2	14338	F	5.89	61.0	4.3	10.0	19.7	7.8	3.68
GROUP MEAN			6.10	56.0	4.6	8.8	25.1	7.0	3.86
3	14331	F	6.01	53.5	4.9	8.8	27.5	5.0	4.61
3	14332	F	5.70	53.5	5.2	8.1	27.0	7.0	3.29
3	14334	F	6.21	52.0	4.9	9.1	25.0	7.9	3.70
3	14335	F	6.10	51.5	4.5	10.4	26.0	6.4	4.39
GROUP MEAN			6.01	52.6	4.9	9.1	26.4	6.6	4.00
4	14274	F	6.49	51.5	5.6	7.2	29.5	8.2	3.51
4	14276	F	6.40	54.0	4.8	11.7	23.0	7.9	3.75
4	14281	F	6.51	48.5	4.5	5.5	32.5	8.8	3.70
4	14282	F	6.20	49.5	5.4	8.3	29.5	8.3	3.79
GROUP MEAN			6.40	50.9	5.1	8.2	28.6	8.3	3.69

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN GM	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN GM
1	14199	F	5.90	48.0	6.1	9.6	27.0	11.3	3.28
1	14209	F	2.10	36.0	5.2	6.9	38.0	16.2	2.35
1	14219	F	6.40	48.0	6.0	7.0	29.0	9.4	2.95
1	14220	F	6.45	47.0	6.6	10.1	27.0	11.7	3.65
GROUP MEAN			5.21	44.8	6.0	8.4	30.3	12.2	3.06
2	14231	F	6.00	47.0	5.4	6.6	28.0	13.7	2.99
2	14336	F	5.89	50.0	6.3	9.8	25.0	9.3	3.01
2	14337	F	6.40	50.0	5.0	9.8	28.0	7.8	4.80
2	14338	F	6.30	58.0	5.3	6.6	22.0	10.9	3.30
GROUP MEAN			6.15	51.3	5.5	8.2	25.8	10.4	3.53
3	14331	F	6.09	54.0	5.8	7.6	27.0	7.6	4.75
3	14332	F	6.00	50.0	5.8	5.2	30.0	10.7	3.09
3	14334	F	5.90	52.0	6.0	8.0	29.0	6.8	3.10
3	14335	F	6.20	54.0	5.6	7.0	28.0	7.6	5.01
GROUP MEAN			6.05	52.5	5.8	7.0	28.5	8.2	3.99
4	14274	F	6.51	47.0	5.2	6.9	31.0	11.8	3.19
4	14276	F	6.10	50.0	6.4	10.2	23.0	12.6	3.60
4	14281	F	6.20	54.0	5.7	7.6	26.0	8.8	3.60
4	14282	F	6.00	52.0	6.7	8.5	25.0	9.6	3.20
GROUP MEAN			6.20	50.8	6.0	8.3	26.3	10.7	3.47

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14199	F	5.60	46.0	6.0	9.0	26.5	12.5	3.05
1	14219	F	5.90	50.0	5.0	10.0	26.0	9.0	2.85
1	14220	F	6.10	47.0	5.0	8.0	29.0	11.0	3.50
GROUP MEAN			5.87	47.7	5.3	9.0	27.2	10.8	3.13
2	14336	F	6.10	49.0	5.0	9.5	28.0	8.5	2.50
2	14337	F	6.30	50.0	5.0	8.0	30.0	7.0	3.95
2	14338	F	6.10	50.0	5.0	10.0	22.5	12.5	2.85
GROUP MEAN			6.17	49.7	5.0	9.2	26.8	9.3	3.10
3	14331	F	6.12	51.0	4.0	9.0	28.0	8.0	4.29
3	14332	F	5.75	50.0	5.0	7.0	31.0	7.0	2.60
3	14335	F	6.11	50.0	7.0	10.0	26.0	7.0	4.69
GROUP MEAN			5.99	50.3	5.3	8.7	28.3	7.3	3.86
4	14274	F	6.51	44.0	6.0	6.0	33.5	10.5	2.81
4	14276	F	6.29	46.0	5.0	9.0	29.5	10.5	3.21
4	14282	F	6.19	42.0	7.0	9.0	34.5	7.5	3.11
GROUP MEAN			6.33	44.0	6.0	8.0	32.5	9.5	3.04

TABLE NO. 3 - INDIVIDUAL BLOOD CHEMISTRY VALUES
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	TOTAL PROTEIN G%	ELECTROPHORESIS ALBUMIN %	ALPHA1 %	ALPHA2 %	BETA %	GAMMA %	TOTAL ALBUMIN G%
1	14199	F	6.31	51.0	5.5	9.5	25.5	8.5	3.71
1	14219	F	6.20	52.5	5.0	8.5	26.0	8.0	3.15
1	14220	F	6.30	48.0	5.5	9.0	28.5	9.0	3.75
GROUP MEAN			6.27	50.5	5.3	9.0	26.7	8.5	3.54
2	14336	F	6.20	49.5	5.0	9.5	30.0	6.0	3.10
2	14337	F	5.94	48.0	5.0	7.5	33.0	6.5	4.50
2	14338	F	6.45	48.0	4.0	10.0	26.0	12.0	2.89
GROUP MEAN			6.20	48.5	4.7	9.0	29.7	8.2	3.50
3	14331	F	6.61	42.0	4.5	9.5	35.0	9.0	4.70
3	14332	F	6.25	50.0	3.5	6.5	32.0	8.0	2.85
3	14335	F	6.51	47.5	6.5	9.0	31.0	6.0	4.20
GROUP MEAN			6.46	46.5	4.8	8.3	32.7	7.7	3.92
4	14274	F	6.45	51.0	4.0	6.0	31.0	8.0	3.11
4	14276	F	6.00	47.0	6.0	7.5	32.0	7.5	3.35
4	14282	F	6.00	45.0	6.0	9.0	34.0	6.0	3.61
GROUP MEAN			6.15	47.7	5.3	7.5	32.3	7.2	3.36

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14116	M	7	1.052	0	0	1	0	1-3	2-4	4-6	MUCH	MANY	MANY	MANY
1	14118	M	7	1.050	0	0	1	T		10-12	4-6	MUCH	MANY	MANY	MANY
1	14239	M	6	1.027	0	0	1	T		25-30		MUCH	MANY	MANY	
1	14240	M	8	1.025	0	0	T	T	1-3	4-6		MUCH	MANY	MANY	FEW
2	14241	M	7	1.047	0	0	1	T	1-3	18-20	2-4	MUCH	MANY	MANY	FEW
2	14242	M	6	1.040	0	0	1	0	4-6	8-10	4-6	MUCH	MANY	MANY	
2	14243	M	7	1.026	0	0	1	0	3-5	8-10	3-5	MUCH	MANY	MANY	
2	14246	M	7	1.020	0	0	T	0	2-4	4-6	2-4	MUCH		MANY	
3	13988	M	8	1.035	0	0	1	1	0-1	8-10	2-4	MUCH	MANY	MANY	MANY
3	14245	M	6	1.043	0	0	T	0	4-6	4-6	3-5	MUCH	MANY	MANY	
3	14249	M	7	1.043	0	0	1	1	4-6	8-10	2-4	MUCH	MANY	MANY	
3	14250	M	7	1.027	0	0	T	T	2-4	6-8	1-3	MUCH	FEW	MANY	
4	14252	M	6	1.046	0	0	1	T	4-6	8-10	4-6	MUCH	MANY	MANY	
4	14256	M	8	1.042	0	0	1	T	2-4	4-6	6-8	MUCH	MANY	MANY	
4	14257	M	7	1.029	0	0	T	0	2-3	12-15		MUCH	MANY	MANY	
4	14258	M	6	1.042	0	0	1	0	1-3	35-40	6-8	MUCH	MANY	MANY	

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14116	M	6	1.041	0	0	1	1	2-4	2-4	1-3	MUCH	MANY	MANY	MANY
1	14118	M	6	1.051	0	0	1	T	1-3	10-12	6-8	MUCH	MANY	MANY	MANY
1	14239	M	6	1.032	0	0	1	0	0-1	4-6	2-4	MUCH	MANY	MANY	FEW
1	14240	M	7	1.029	0	0	1	0	0-1	2-4	1-3	MUCH	MANY	MANY	MANY
2	14241	M	7	1.037	0	0	1	0	0-1	4-6	1-3	MUCH	MANY	MANY	MANY
2	14242	M	7	1.020	0	0	1	0	1-3	6-8	1-3	MUCH	MANY	MANY	FEW
2	14243	M	6	1.032	0	0	1	0	1-3	4-6	2-4	MUCH	MANY	MANY	MANY
2	14246	M	9	1.055	0	0	1	0	0-1	1-3	6-8	MUCH	MANY	MANY	
3	13245	M	7	1.041	0	0	1	T	2-4	8-10	4-6	MUCH	MANY	MANY	MANY
3	13988	M	7	1.040	0	0	1	T	1-3	2-4	2-4	MUCH	MANY	MANY	MANY
3	14249	M	5	1.043	0	0	1	T	1-2	4-6	6-8	MUCH	MANY	MANY	FEW
3	14250	M	5	1.031	0	0	1	0		6-8	2-4	MUCH	MANY	MANY	
4	14252	M	7	1.026	0	0	1	0	2-4	4-6	2-4	MUCH	MANY	MANY	
4	14256	M	5	1.032	0	0	1	0	0-1	1-3	2-4	MUCH	FEW	MANY	
4	14257	M	7	1.036	0	0	1	0	1-3	8-10	6-8	MUCH	MANY	MANY	MANY
4	14258	M	5	1.032	0	0	1	0		8-10	4-6	MUCH	MANY	MANY	FEW

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14116	M	6	1.050	0	0	1	3		3-6		MUCH		FEW	FEW
1	14118	M	6	1.045	0	0	1	2		15-20	3-4		MANY	FEW	FEW
1	14239	M	6	1.033	0	0	1	3		0-1	0-1			FEW	FEW
1	14240	M	8	1.041	0	0	2	1		1-2	1-2	LITTLE	MANY	MANY	FEW
2	14241	M	8	1.054	0	0	2	3		10-15	3-5	LITTLE	MANY	MANY	FEW
2	14242	M	7	1.06+	0	0	2	T		3-5	1-2		MANY	FEW	FEW
2	14243	M	6	1.050	0	0	1	2		2-3	1-2		MANY	FEW	FEW
2	14246	M	6	1.042	0	0	1	1		3-4	4-6	LITTLE	MANY	MANY	
3	13988	M	6	1.045	0	0	1	3		3-4	2-3		MANY	FEW	FEW
3	14245	M	6	1.055	0	0	1	3		10-15	1-2		FEW	FEW	FEW
3	14249	M	7	1.048	0	0	1	3		TNTC	3-4		MANY	MANY	FEW
3	14250	M	5	1.035	0	0	1	1		4-5	2-3			FEW	FEW
4	14252	M	8	1.035	0	0	1	T		2-3	2-3	LITTLE	MANY	MANY	FEW
4	14256	M	6	1.045	0	0	1	1		2-3	2-4	LITTLE	MANY	MANY	FEW
4	14257	M	5	1.045	0	0	1	T		8-10		LITTLE		MANY	FEW
4	14258	M	6	1.030	0	0	2	T	TNTC	TNTC		MUCH		MANY	

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14116	M	7	1.048	0	0	T	T		2-4	1-3	MUCH	MANY	MANY	MANY
1	14118	M	7	1.06+	0	0	1	T	2-4	6-8	2-4	MUCH	MANY	MANY	MANY
1	14239	M	7	1.041	0	0	1	T	1-3	2-4		MUCH	MANY	MANY	MANY
1	14240	M	8	1.035	0	0	T	0		3-5	2-4	MUCH	MANY	MANY	MANY
2	14241	M	6	1.058	0	0	1	1		2-4		MUCH	MANY	MANY	MANY
2	14242	M	6	1.030	0	0	0	0	0-1			LITTLE	MANY	MANY	MANY
2	14243	M	7	1.030	0	0	T	0		2-4			MANY	MANY	MANY
2	14246	M	7	1.046	0	0	1	T		2-4		MUCH	MANY	MANY	MANY
3	13988	M	7	1.025	0	0	T	0	1-3	2-4		MUCH	MANY	MANY	MANY
3	14245	M	7	1.027	0	0	T	0		TNTC		MUCH	MANY	MANY	MANY
3	14249	M	6	1.037	0	0	T	0	1-3	14-16		MUCH	MANY	MANY	MANY
3	14250	M	7	1.017	0	0	0	0	2-4	8-10		LITTLE	MANY	MANY	
4	14252	M	8	1.030	0	0	0	T	1-3	2-4		LITTLE	MANY	MANY	MANY
4	14256	M	6	1.042	0	0	1	T		3-5			MANY	MANY	MANY
4	14257	M	6	1.06+	0	0	1	0	1-3	4-6		MUCH	MANY	MANY	MANY
4	14258	M	6	1.050	0	0	1	0		TNTC	2-4	MUCH	MANY	MANY	MANY

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14116	M	7	1.032	0	0	0	T		0-1				MANY	FEW
1	14118	M	7	1.049	0	0	T	T	0-1	4-5	2-3		MANY	MANY	FEW
1	14239	M	6	1.053	0	0	T	T		2-3	2-3		MANY		FEW
1	14240	M	8	1.039	0	0	1	1	1-2	3-4			MANY	FEW	FEW
2	14241	M	7	1.043	0	0	1	1		3-4	12-15		FEW		
2	14242	M	7	1.040	0	0	T	0		3-5	2-3	LITTLE	FEW		
2	14243	M	6	1.030	0	0	0	0	3-5	5-6			FEW	MANY	
2	14246	M	6	1.045	0	0	0	T		4-5		MUCH	MANY	MANY	
3	13988	M	7	1.016	0	0	T	0		1-2			FEW	MANY	
3	14245	M	7	1.046	0	0	1	T		10-12	3-5		MANY	FEW	
3	14249	M	6	1.040	0	0	T	1		20-25	3-4		FEW		FEW
3	14250	M	7	1.035	0	0	0	0			0-1		FEW	MANY	
4	14252	M	8	1.053	0	0	1	1		2-3	2-3		MANY		FEW
4	14256	M	7	1.018	0	0	0	0				LITTLE	FEW	MANY	
4	14257	M	7	1.056	0	0	1	1	3-4	2-3	3-4		MANY		FEW
4	14258	M	6	1.053	0	0	1	0		10-12	6-8				FEW

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 26

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14199	F	7	1.047	0	0	T	0		4-6	1-3	MUCH	MANY	MANY	
1	14209	F	8	1.046	0	0	1	0		2-4		MUCH	MANY	MANY	
1	14219	F	7	1.032	0	0	T	0		1-3		MUCH	MANY	MANY	
1	14220	F	6	1.053	0	0	1	0		4-6		MUCH	MANY	MANY	
2	14231	F	8	1.045	0	0	T	0		6-8		MUCH	MANY	MANY	
2	14336	F	8	1.059	0	0	1	0				MUCH	MANY	MANY	
2	14337	F	7	1.050	0	0	T	0		4-6	1-3	MUCH	MANY	MANY	
2	14338	F	6	1.06+	0	0	1	0		3-5		MUCH	MANY	MANY	
3	14331	F	9	1.047	0	0	1	0	8-10		4-6	MUCH	MANY	MANY	
3	14332	F	6	1.057	0	0	T	0	1-3	TNTC	2-4	MUCH	MANY	MANY	
3	14334	F	7	1.040	0	0	T	0		4-6	4-6	LITTLE	MANY	MANY	
3	14335	F	8	1.052	0	0	1	0	8-10	10-12		MUCH	MANY	MANY	
4	14274	F	7	1.039	0	0	T	0		4-6		LITTLE	MANY	MANY	
4	14276	F	8	1.037	0	0	1	0	2-4	3-5		MUCH	MANY	MANY	
4	14281	F	6	1.055	0	0	T	T		4-6	2-4	MUCH	MANY	MANY	
4	14282	F	6	1.060	0	0	1	0		6-8	8-10	MUCH	MANY	MANY	

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14116	M	6	1.050	0	0	T	0		0-2	0-2	LITTLE	MANY	MANY	MANY
1	14118	M	7	1.032	0	0	T	0		0-2			FEW	MANY	
1	14240	M	8	1.040	0	0	T	0		0-1		LITTLE	MANY	MANY	
2	14242	M	6	1.060	0	0	T	0		0-2			MANY	MANY	
2	14243	M	6	1.055	0	0	T	T					MANY	FEW	FEW
2	14246	M	6	1.06+	1	0	1	T	0-1	0-2		LITTLE	MANY	MANY	
3	13988	M	6	1.055	0	0	T	T		6-9	3-5	MUCH	MANY	MANY	
3	14245	M	6	1.032	0	0	T	0	2-6	4-8	2-6	MUCH	MANY	MANY	
3	14249	M	6	1.06+	T	0	1	T		10-15	3-6	MUCH	MANY	MANY	FEW
4	14252	M	8	1.045	1	0	1	1	1-3	2-4	2-3		MANY	FEW	FEW
4	14256	M	6	1.022	0	0	T	T				MUCH		MANY	
4	14257	M	6	1.060	T	0	1	0		3-4	2-3	MUCH	MANY	FEW	FEW

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14116	M	8	1.050	0	0	1	1	0-2	0-2	3-4	MUCH	MANY	MANY	FEW
1	14118	M	7	1.051	T	0	1	1		0-1	0-3	LITTLE	FEW	FEW	FEW
1	14240	M	8	1.035	0	0	T	T				MUCH	MANY	FEW	
2	14242	M	7	1.015	0	0	0	T		2-4	3-4	LITTLE	FEW	FEW	FEW
2	14243	M	7	1.051	T	0	1	2			0-3	LITTLE	FEW	FEW	
2	14246	M	7	1.059	1	0	1	1		0-1	0-3	LITTLE	FEW	FEW	
3	13988	M	8	1.045	0	0	T	1		0-3	10-20	MUCH	MANY	MANY	FEW
3	14245	M	7	1.050	0	0	1	0		3-5	10-20	MUCH	MANY	MANY	
3	14249	M	7	1.051	0	0	T	0		10-15	0-5	LITTLE	MANY	FEW	FEW
4	14252	M	8	1.034	0	0	T	T		0-1	3-5	LITTLE	FEW	MANY	
4	14256	M	9	1.041	0	0	1	1		5-7	10-15	MUCH		MANY	FEW
4	14257	M	6	1.050	T	0	T	T	0-1			LITTLE	FEW	MANY	

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
1ST INITIAL

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14199	F	7	1.033	0	0	T	0	2-4	8-10	3-5		MANY	MANY	
1	14209	F	7	1.035	0	0	T	0		4-6		MUCH	MANY	MANY	
1	14219	F	7	1.036	0	0	T	0		6-8	4-6	MUCH	MANY	MANY	
1	14220	F	7	1.035	0	0	T	0		8-10	3-5	MUCH	MANY	MANY	
2	14231	F	9	1.026	0	0	T	0	4-6	8-10	8-10	MUCH	MANY	MANY	
2	14336	F	5	1.033	0	0	T	0		6-8	2-4	MUCH	MANY	MANY	
2	14337	F	7	1.035	0	0	T	0	1-3	6-8		MUCH	MANY	MANY	
2	14338	F	5	1.030	0	0	T	0	4-6	4-6		MUCH	MANY	MANY	
3	14331	F	6	1.025	0	0	T	0		12-15	1-3	MUCH	MANY	MANY	
3	14332	F	7	1.032	0	0	T	0		1-3	2-4	MUCH	MANY	MANY	
3	14334	F	8	1.015	0	0	0	0		4-6	2-4	MUCH	MANY	MANY	
3	14335	F	5	1.031	0	0	T	0	1-3	8-10		LITTLE	FEW	FEW	
4	14274	F	7	1.033	0	0	T	0		TNTC	2-3	MUCH	MANY	MANY	
4	14276	F	7	1.010	0	0	T	0		10-12		MUCH	MANY	MANY	
4	14281	F	6	1.038	0	0	T	0	1-3	10-12	4-6	MUCH		MANY	
4	14282	F	5	1.045	0	0	T	0		8-10	2-4	MUCH	MANY	MANY	

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 4

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14199	F	5	1.041	0	0	1	0		4-6	3-5	MUCH	MANY	MANY	
1	14200	F	7	1.027	0	0	1	0		4-6	2-4	MUCH	FEW	MANY	
1	14209	F	6	1.034	0	0	1	0		0-1	4-6	MUCH		MANY	
1	14219	F	7	1.029	0	0	1	T			3-5	MUCH	FEW	MANY	
2	14231	F	8	1.047	0	0	1	0		6-8	1-3	MUCH	MANY	MANY	
2	14336	F	7	1.038	0	0	1	0		2-4	2-4	MUCH	MANY	MANY	
2	14337	F	9	1.037	0	0	1	0	1-3	4-6	2-4	MUCH	MANY	MANY	
2	14338	F	7	1.048	0	0	1	0	1-3	15-20	2-4	MUCH	MANY	MANY	
3	14331	F	7	1.031	0	0	1	0		TNTC	6-8	MUCH	MANY	MANY	
3	14332	F	5	1.042	0	0	1	0		TNTC	8-10	MUCH	MANY	MANY	
3	14334	F	6	1.06+	0	0	1	0		8-10	2-4	MUCH	FEW	MANY	
3	14335	F	7	1.031	0	0	1	0		10-12	4-6	MUCH	MANY	MANY	
4	14274	F	6	1.033	0	0	1	0	1-3	8-10	4-6	MUCH	MANY	MANY	
4	14276	F	5	1.031	0	0	1	0	1-3	2-4	4-6	MUCH	MANY	MANY	
4	14281	F	5	1.052	0	0	1	0		10-12	8-10	MUCH		MANY	
4	14282	F	5	1.054	0	0	1	0	2-4	15-20	10-12	MUCH		MANY	

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 13

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14199	F	7	1.010	0	0	T	0				LITTLE	FEW	MANY	
1	14209	F	6	1.029	0	0	T	T			0-1			MANY	
1	14219	F	9	1.026	0	0	1	0				MUCH	MANY	MANY	
1	14220	F	6	1.041	0	0	1	0		3-5	3-4	LITTLE	FEW	MANY	
2	14231	F	8	1.045	0	0	2	0		1-3	1-2		MANY	FEW	
2	14336	F	7	1.050	0	0	2	0	0-1	1-2	6-8		MANY	FEW	
2	14337	F	6	1.042	0	0	1	0		10-15	8-10			FEW	
2	14338	F	6	1.050	0	0	1	0		10-15	6-8		MANY	FEW	
3	14331	F	8	1.040	0	0	2	0		12-15	2-4	MUCH	MANY	MANY	
3	14332	F	6	1.06+	0	0	1	0		2-3	2-4		FEW	FEW	
3	14334	F	9	1.035	0	0	1	T		3-4	TNTC	MUCH	MANY	MANY	
3	14335	F	8	1.042	0	0	1	0					FEW	FEW	
4	14274	F	7	1.052	0	0	1	T		4-5	3-4		MANY	MANY	
4	14276	F	7	1.030	0	0	1	0						MANY	
4	14281	F	6	1.038	0	0	T	2		0-2		MUCH		FEW	
4	14282	F	7	1.042	0	0	1	T		TNTC	3-5	LITTLE	MANY	MANY	

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 52

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SU-GAR	ACE-TONE	PRO-TEIN	BILI-RUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14199	F	9	1.025	0	0	T	0		2-3		LITTLE	FEW	MANY	
1	14209	F	8	1.038	0	0	1	T		3-4	2-3		FEW	MANY	
1	14219	F	7	1.055	0	0	1	0	2-3	5-6	4-5		MANY		
1	14220	F	7	1.047	0	0	T	0		2-3	2-3		MANY	MANY	
2	14231	F	8	1.053	0	0	1	0		1-2	2-3		MANY		
2	14336	F	6	1.052	0	0	1	0		2-3	6-8		MANY		
2	14337	F	6	1.046	0	0	T	0		6-8	4-5		MANY	FEW	
2	14338	F	6	1.050	0	0	T	0	3-4	3-4	2-3		MANY	FEW	
3	14331	F	9	1.035	0	0	T	0	1-2	2-3	2-3		MANY	MANY	
3	14332	F	7	1.060	0	0	1	0		4-5	2-3		FEW		
3	14334	F	6	1.035	0	0	0	T	5-6	2-3	2-3		FEW	MANY	
3	14335	F	8	1.06+	0	0	1	0		5-6	4-5		MANY	FEW	
4	14274	F	7	1.047	0	0	1	0	2-3	5-6	2-3		FEW	MANY	
4	14276	F	7	1.053	0	0	1	0		2-3	3-4		MANY	FEW	
4	14281	F	6	1.057	0	0	1	T		2-3	3-4	MUCH			
4	14282	F	7	1.047	0	0	1	0		2-3	1-2		FEW		

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 78

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14199	F	8	1.025	0	0	T	0				LITTLE	MANY	MANY	
1	14219	F	7	1.030	0	0	T	0		0-1		MUCH	FEW	MANY	
1	14220	F	8	1.037	0	0	T	0		0-2			MANY	FEW	
2	14336	F	7	1.045	0	0	T	0					MANY	MANY	
2	14337	F	6	1.06+	1	0	T	0	0-2	0-1			MANY	MANY	
2	14338	F	8	1.035	0	0	T	0		0-1		LITTLE	MANY	MANY	
3	14331	F	8	1.037	0	0	T	0		2-3	2-3		MANY	MANY	
3	14332	F	6	1.052	0	0	T	0	0-1	3-8	1-3		FEW	FEW	
3	14335	F	7	1.040	T	0	T	0		1-2	1-3		MANY	FEW	
4	14274	F	6	1.050	0	0	1	0		6-8	1-2		FEW	FEW	
4	14276	F	7	1.049	T	0	1	0		2-4	2-4	MUCH	MANY	MANY	
4	14282	F	7	1.048	0	0	1	0		6-8	2-4	LITTLE	MANY	FEW	

TABLE NO. 4 - URINE ANALYSIS
PUREBRED BEAGLES RECEIVING X-5120 FOR 104 WEEKS
WEEK 104

GROUP NUMBER	ANIMAL NUMBER	SEX	PH	SP.GR.	SUGAR	ACETONE	PROTEIN	BILIRUBIN	MICROSCOPIC FINDINGS RBC	WBC	EPITH	AMORPH	CRYS	BACT	SPERM
1	14199	F	8	1.031	0	0	1	0	0-4	0-1	3-4	MUCH	FEW	FEW	
1	14219	F	8	1.037	0	0	T	T			2-5	LITTLE	FEW	FEW	
1	14220	F	8	1.042	0	0	T	0					MANY		
2	14336	F	8	1.020	0	0	0	0				LITTLE	FEW	FEW	
2	14337	F	6	1.06+	1	0	T	0		0-1	0-2	LITTLE	MANY	MANY	
2	14338	F	8	1.027	T	0	T	T		0-2	2-4	LITTLE	FEW	FEW	
3	14331	F	8	1.046	0	0	T	0		0-2	3-5	LITTLE	MANY	MANY	
3	14332	F	6	1.036	0	0	T	0		0-1	0-3		FEW	FEW	
3	14335	F	6	1.046	1	0	T	0	0-1	0-2	0-3		MANY	FEW	
4	14274	F	8	1.032	T	0	T	T	30-40	0-2	10-15		FEW	MANY	
4	14276	F	8	1.036	T	0	1	0	0-1	0-3	3-5		MANY	FEW	
4	14282	F	7	1.036	T	0	T	T	0-1	5-10	3-8		FEW	FEW	

TABLE NO.

TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, AND ORGAN/BODY WEIGHT RATIOS

SPECIES AND STRAIN - BEAGLE INTERVAL - 52 WEEKS
MATERIAL - X-5120 ROUTE OF ADMINISTRATION - DIETARY

MALES - GROUP 1

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14239	12.10	1.000	0.0082	103.900	0.8586	284.000	2.3471	35.900	0.2966

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT	TESTES WEIGHT G	TESTES RATIO PCT
14239	12.10	62.500	0.5165	1.370	0.0113	19.700	0.1628

TABLE NO. 5 - CONTINUED

MALES - GROUP 2

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14241	10.90	0.830	0.0076	97.700	0.8963	258.000	2.3669	32.700	0.3000

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT	TESTES WEIGHT G	TESTES RATIO PCT
14241	10.90	45.700	0.4192	1.200	0.0110	19.600	0.1798

TABLE NO. 5 - CONTINUED

MALES - GROUP 3

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14250	9.00	0.990	0.0110	91.500	1.0166	278.000	3.0888	19.400	0.2155

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT	TESTES WEIGHT G	TESTES RATIO PCT
14250	9.00	50.700	0.5633	1.120	0.0124	24.600	0.2733

TABLE NO. 5 - CONTINUED

MALES - GROUP 4

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14258	10.30	1.180	0.0114	96.900	0.9407	343.000	3.3300	33.700	0.3271

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT	TESTES WEIGHT G	TESTES RATIO PCT
14258	10.30	56.300	0.5466	1.160	0.0112	18.900	0.1834

TABLE NO. 5 - CONTINUED

FEMALES - GROUP 1

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14209	10.70	0.830	0.0077	101.300	0.9467	268.000	2.5046	27.500	0.2570

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT
14209	10.70	53.600	0.5009	1.290	0.0120

TABLE NO. 5 - CONTINUED

FEMALES - GROUP 2

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14231	10.20	0.940	0.0092	95.900	0.9401	228.000	2.2352	32.400	0.3176

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT
14231	10.20	44.600	0.4372	1.340	0.0131

TABLE NO. 5 - CONTINUED

FEMALES - GROUP 3

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14334	12.10	1.000	0.0082	98.000	0.8099	267.000	2.2066	31.800	0.2628

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT
14334	12.10	53.000	0.4380	1.300	0.0107

TABLE NO. 5 - CONTINUED

FEMALES - GROUP 4

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14281	8.10	0.920	0.0113	76.100	0.9395	216.000	2.6666	24.400	0.3012

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT
14281	8.10	43.400	0.5358	1.280	0.0158

Table No. 5 - TERMINAL BODY WEIGHTS, ORGAN WEIGHTS, AND ORGAN/BODY WEIGHT RATIOS

SPECIES AND STRAIN - PUREBRED BEAGLES INTERVAL - TERMINAL
MATERIAL - X-5120 ROUTE OF ADMINISTRATION - DIETARY

MALES - CONTROL

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14116	12.40	0.980	0.0079	83.300	0.6718	294.000	2.3710	22.200	0.1790
14118	9.10	1.100	0.0121	82.300	0.9044	261.000	2.8681	18.500	0.2033
14240	12.10	0.890	0.0074	98.200	0.8116	314.000	2.5950	31.900	0.2636
MEAN	11.20	0.990	0.0091	87.933	0.7959	289.667	2.6114	24.200	0.2153

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT	TESTES WEIGHT G	TESTES RATIO PCT
14116	12.40	55.100	0.4444	1.280	0.0103	21.800	0.1758
14118	9.10	51.100	0.5615	1.200	0.0132	17.900	0.1967
14240	12.10	79.400	0.6562	1.660	0.0137	24.200	0.2000
MEAN	11.20	61.867	0.5540	1.380	0.0124	21.300	0.1908

Table No. 5 - Continued

MALES - 500 PPM

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14242	18.30	1.080	0.0059	121.200	0.6623	407.000	2.2240	30.200	0.1650
14243	13.80	1.000	0.0072	113.000	0.8188	320.000	2.3188	33.800	0.2449
14246	10.10	0.990	0.0098	91.500	0.9059	256.000	2.5347	18.200	0.1802
MEAN	14.07	1.023	0.0076	108.567	0.7957	327.667	2.3592	27.400	0.1967

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT	TESTES WEIGHT G	TESTES RATIO PCT
14242	18.30	73.400	0.4011	1.200	0.0066	21.700	0.1186
14243	13.80	67.800	0.4913	1.600	0.0116	29.500	0.2138
14246	10.10	61.000	0.6040	1.000	0.0099	10.500	0.1040
MEAN	14.07	67.400	0.4988	1.267	0.0094	20.567	0.1454

Table No. 5 - Continued

MALES - 5000 PPM

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
13988	16.00	0.800	0.0050	17.800	0.1112	353.000	2.2062	35.100	0.2194
14245	11.60	1.060	0.0091	95.400	0.8224	328.000	2.8276	20.100	0.1733
14249	11.50	0.960	0.0083	103.400	0.8991	278.000	2.4174	31.800	0.2765
MEAN	13.03	0.940	0.0075	72.200	0.6109	319.667	2.4837	29.000	0.2231

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT	TESTES WEIGHT G	TESTES RATIO PCT
13988	16.00	67.400	0.4212	1.400	0.0087	25.400	0.1587
14245	11.60	73.800	0.6362	1.400	0.0121	25.600	0.2207
14249	11.50	52.400	0.4557	1.450	0.0126	24.100	0.2096
MEAN	13.03	64.533	0.5044	1.417	0.0111	25.033	0.1963

Table No. 5 - Continued

MALES - 50,000 PPM

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14257	10.60	0.700	0.0066	103.800	0.9792	264.000	2.4906	23.500	0.2217
14252	10.00	0.850	0.0085	77.500	0.7750	226.000	2.2600	226.000	2.2600
14256	10.50	1.020	0.0097	77.900	0.7419	330.000	3.1429	32.800	0.3124
MEAN	10.37	0.857	0.0082	86.400	0.8320	273.333	2.6329	94.100	0.2647

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT	TESTES WEIGHT G	TESTES RATIO PCT
14257	10.60	54.100	0.5104	0.900	0.0085		
14252	10.00	25.200	0.2520	1.000	0.0100	14.700	0.1470
14256	10.50	61.200	0.5829	1.350	0.0129	25.700	0.2448
MEAN	10.37	46.833	0.4484	1.083	0.0104	20.200	0.1959

Table No. 5 - Continued

FEMALES - CONTROL

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14199	10.80	0.640	0.0059	82.000	0.7593	286.000	2.6481	33.100	0.3065
14219	12.10	0.730	0.0060	78.700	0.6504	267.100	2.2074	25.100	0.2074
14220	16.60	1.510	0.0091	104.800	0.6313	375.000	2.2590	34.200	0.2060
MEAN	13.17	0.960	0.0070	88.500	0.6803	309.366	2.3715	30.800	0.2400

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT
14199	10.80	53.600	0.4963	1.700	0.0157
14219	12.10	51.100	0.4223	2.230	0.0184
14220	16.60	62.000	0.3735	2.260	0.0136
MEAN	13.17	55.567	0.4307	2.063	0.0159

Table No. 5 - Continued

FEMALES - 500 PPM

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14336	13.60	0.940	0.0069	86.700	0.6375	370.000	2.7206	25.300	0.1860
14337	10.40	0.660	0.0063	76.700	0.7375	241.000	2.3173	25.600	0.2462
14338	13.10	1.310	0.0100	82.500	0.6298	284.000	2.1679	25.600	0.1954
MEAN	12.37	0.970	0.0078	81.967	0.6683	298.333	2.4019	25.500	0.2092

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT
14336	13.60	613.000	4.5074	1.680	0.0124
14337	10.40	47.200	0.4538	1.320	0.0127
14338	13.10	49.200	0.3756	1.990	0.0152
MEAN	12.37	236.467	1.7789	1.663	0.0134

Table No. 5 - Continued

FEMALES - 50,000 PPM

ANIMAL NO.	TERM. BODY WEIGHT KG	THYROID WEIGHT G	THYROID RATIO PCT	HEART WEIGHT G	HEART RATIO PCT	LIVER WEIGHT G	LIVER RATIO PCT	SPLEEN WEIGHT G	SPLEEN RATIO PCT
14274	15.60	1.000	0.0064	124.800	0.8000	395.000	2.5321	34.200	0.2192
14276	10.00	1.040	0.0104	86.200	0.8620	271.000	2.7100	20.400	0.2040
14282	8.70	0.720	0.0083	60.300	0.6931	249.000	2.8621	15.000	0.1724
MEAN	11.43	0.920	2.000	90.433	0.7850	305.000	2.7014	23.200	0.1985

ANIMAL NO.	TERM. BODY WEIGHT KG	KIDNEYS WEIGHT G	KIDNEYS RATIO PCT	ADRENALS WEIGHT G	ADRENALS RATIO PCT
14274	15.60	69.800	0.4474	2.120	0.0136
14276	10.00	47.900	0.4790	1.590	0.0159
14282	8.70	45.500	0.5230	1.000	0.0115
MEAN	11.43	54.400	0.4831	1.570	0.0136

HISTOPATHOLOGICAL EVALUATION OF MALE AND FEMALE PUREBRED BEAGLES
SACRIFICED AT 52-WEEKS

X-5120

GROUP NO. 1
Male Dog No. 14239

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Most follicles moderate in size and lined by cuboidal epithelium.
Adrenal:	
No alterations observed.	Slight vacuolation of the zona glomerulosa and zona fasciculata.
Small Intestine:	
Mucosa appeared slightly reddened.	Section examined microscopically not remarkable.
Testis:	
No alterations observed.	Large numbers of spermatozoa in epididymal duct, along with normal spermatogenic activity in seminiferous tubules.
Bone Marrow:	
No alterations observed.	Normal hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, spleen, liver, kidney, stomach, pancreas, large intestine, mesenteric lymph node, and urinary bladder.

GROUP NO. 2
Male Dog No. 14241

GROSS	MICROSCOPIC
Kidney:	
No alterations observed.	Occasional small focus of regenerative tubular epithelium.
Unusual Lesion:	
Urinary Bladder - Marked petechiae.	Small focal area of cystitis characterized by loss of the transitional epithelium, accompanied by infiltration of neutrophils, and hemorrhage in the submucosal tissue. With exception of the small focal area of ulceration and inflammation, remainder of urinary bladder section not remarkable.

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 3
Male Dog No. 14250

GROSS	MICROSCOPIC
Kidney:	
No alterations observed.	Slight to moderate pyelitis, with infiltration of mononuclear inflammatory cells beneath the transitional epithelium of renal pelvis.
	Section, otherwise, not remarkable.

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 4
Male Dog No. 14258

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Most follicles moderate in size and lined by cuboidal epithelium. Several small focal areas of nonsuppurative thyroiditis noted, in which cells of the lymphoreticular series present in association with degenerating and atrophic follicles.
Adrenal:	
No alterations observed.	Slight to moderate vacuolation of the zona glomerulosa and zona fasciculata.
Kidney:	
No alterations observed.	Nonsuppurative pyelitis, with infiltration of large numbers of mononuclear inflamatory cells beneath the transitional epithelium in the renal pelvis. Thickening of the transitional epithelium of the renal pelvis. Ballooning degeneration of epithelial cells noted in the collecting tubules near the tip of the renal papilla. Degeneration characterized by increased size of the epithelial cells, along with a globular appearance of the cytoplasm.

GROUP NO. 4
Male Dog No. 14258 (Continued)

GROSS	MICROSCOPIC
Stomach:	
No alterations observed.	Slight nonsuppurative gastritis, with increased numbers of mononuclear inflammatory cells in the mucosa.
Small Intestine:	
No alterations observed.	Not remarkable, except for early postmortem autolysis.
Testis:	
No alterations observed.	Normal spermatogenic activity.
Bone Marrow:	
No alterations observed.	Normal hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, spleen, liver, pancreas, large intestine, mesenteric lymph node, and urinary bladder.

GROUP NO. 1
Female Dog No. 14209

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Most follicles moderate in size and lined by cuboidal epithelium.
Adrenal:	
No alterations observed.	Slight to moderate vacuolation of the zona glomerulosa and zona fasciculata.
Urinary Bladder:	
No alterations observed.	Occasional small areas of submucosal hemorrhage.
Ovary:	
No alterations observed.	Numerous varying-sized maturing follicles. Several of the follicles very large in size, approaching mature Graafian follicle stage. Section within normal histologic limits.
Bone Marrow:	
No alterations observed.	Normal hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, spleen, liver, kidney, stomach, pancreas, small intestine, large intestine, and mesenteric lymph node.

GROUP NO. 4
Female Dog No. 14281

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Most follicles moderate in size and lined by cuboidal epithelium.
Adrenal:	
No alterations observed.	Slight vacuolation of the zona glomerulosa and zona fasciculata.
Kidney:	
No alterations observed.	An occasional dilated tubule containing proteinaceous material; however, overall appearance of kidney section not remarkable.
Mesenteric Lymph Node:	
No alterations observed.	Section not available for examination.
Ovary:	
No alterations observed.	Numerous small, variable-sized maturing follicles present, along with several regressing corpora lutea. Appearance within normal histologic limits.
Bone Marrow:	
No alterations observed.	Normal hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, spleen, liver, stomach, pancreas, small intestine, large intestine, and urinary bladder.

GROUP NO. 2
Female Dog No. 14231

GROSS	MICROSCOPIC
Kidney:	
No alterations observed.	Very minimal degree of pyelitis, with infiltration of small numbers of mononuclear inflammatory cells beneath the transitional epithelium of the renal pelvis. Section, otherwise, not remarkable.
Unusual Lesion:	
Pituitary - Contained small cyst at the base.	Several small, cystic spaces at the junction of the pars anterior and pars nervosa near the base of the pituitary.

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 3
Female Dog No. 14334

GROSS	MICROSCOPIC
Unusual Lesion:	
Pituitary - Cyst noted at the base.	Cystic space noted grossly not apparent on sections examined microscopically.

The following organs were not altered grossly or microscopically: liver and kidney.

HISTOPATHOLOGICAL EVALUATION OF MALE AND FEMALE BEAGLE DOGS
SACRIFICED AT 104 WEEKS

GROUP NO. 1
Male Dog No. 14116

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly medium-sized follicles present. Epithelium lining the follicles often cuboidal. Scattered collections of small-sized follicles. Slight amount of parafollicular tissue.
Adrenal Gland:	
No alterations observed.	Moderate diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Minimal numbers of lymphoid follicles. Slight amount of brown, granular pigment in the red pulp. Minimal extramedullary hematopoiesis.
Testis:	
No alterations observed.	Active spermatogenesis.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, kidney, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, and urinary bladder.

GROUP NO. 1
Male Dog No. 14118

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly medium- and small-sized follicles. Epithelium lining the follicles chiefly cuboidal. Slight amount of parafollicular tissue. Calcareous bodies are seen within the colloid in a small number of follicles.
Adrenal Gland:	
No alterations observed.	Moderate diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Slight amount of lymphoid tissue. Slight amount of brown, granular pigment in the red pulp.
Kidney:	
No alterations observed.	Slight mononuclear cell infiltration in the pelvis.
Testis:	
No alterations observed.	Active spermatogenesis.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity with numerous maturing erythroid and myloid cells.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, and urinary bladder.

GROUP NO. 1
Male Dog No. 14240

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly medium- and small-sized follicles.
	Occasional follicles contain small calcareous bodies.
	Epithelium lining the follicles chiefly low cuboidal.
	Minimal amount of parafollicular tissue.
Adrenal Gland:	
No alterations observed.	Moderate diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Slight amount of lymphoid tissue.
	Slight amount of brown, granular pigment in the red pulp.
	Minimal extramedullary hematopoiesis.
Kidney:	
No alterations observed.	Moderate nonsuppurative pyelitis.
	Infiltration of mononuclear cells in the subepithelial stroma and the epithelium lining the pelvis.
	Minimal foci of chronic interstitial nephritis.
Testis:	
No alterations observed.	Active spermatogenesis.

GROUP NO. 1
Male Dog No. 14240 - (Continued)

GROSS	MICROSCOPIC
Bone Marrow:	
No alterations observed.	Moderately great hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, and urinary bladder.

GROUP NO. 2
Male Dog No. 14242

GROSS	MICROSCOPIC

The following organs were not altered grossly or microscopically: liver and kidney.

GROUP NO. 2
Male Dog No. 14243

Small Intestine:	
Red to black hemorrhagic-appearing areas in the jejunum and ileum.	Changes observed in the jejunum and ileum were not observed microscopically.
Large Intestine:	
Longitudinal darkened striations in the colon.	Not remarkable.

The following organs were not altered grossly or microscopically: liver and kidney.

GROUP NO. 2
Male Dog No. 14246

The following organs were not altered grossly or microscopically: liver and kidney.

GROUP NO. 3
Male Dog No. 13988

GROSS	MICROSCOPIC
Kidney:	
No alterations observed.	A rare focus of chronic interstitial nephritis.
Small Intestine:	
Mucosa slightly reddened in some areas.	In section of jejunum there is slight congestion of superficial villi.

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 3
Male Dog No. 14245

The following organs were not altered grossly or microscopically: liver and kidney.

GROUP NO. 3
Male Dog No. 14249

Kidney:	
No alterations observed.	Some sectioning and staining artifacts present.
Spleen:	
Area has lesion resembling a scar.	Large siderotic nodule extending beneath the capsule of spleen which contains a foci of brown, granular pigment aggregated into coarse collections.

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 4
Male Dog No. 14252

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Small-sized follicles predominate. Epithelium lining the follicles chiefly low cuboidal. Slight to moderate amount of parafollicular tissue. Minimal number of follicles contain small calcareous bodies.
Adrenal Gland:	
No alterations observed.	Moderate diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Small amount of lymphoid tissue. Slight amount of brown, granular pigment in the red pulp.
Small Intestine:	
No alterations observed.	Small number of glands exhibit ectasia and contain eosinophilic material with scattered neutrophils. Artifacts are present in this section which make interpretation difficult.
Testes:	
Section A - Right testis appears small.	Moderate epididymitis with purulent exudate within the epididymal duct and interstitial

GROUP NO. 4
Male Dog No. 14252 (Continued)

GROSS	MICROSCOPIC
	chronic inflammation.
	Seminiferous tubules show a reduction in spermatogenic activity with moderate seminiferous tubule atrophy.
	Slight nonsuppurative orchitis and interstitial fibrosis.
Section B	Section shows active spermatogenesis.
	Epididymal duct has many spermatozoa.
	Slight epididymitis characterized chiefly by the presence of mononuclear inflammatory cells in interstitial locations.
	A few suppurative pockets of inflammation.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, kidney, stomach, large intestine, pancreas, mesenteric lymph node, and urinary bladder.

GROUP NO. 4
Male Dog No. 14256

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly small- to medium-sized follicles. Epithelium lining the follicles usually cuboidal in type. Moderate amount of parafollicular tissue.
Adrenal Gland:	
No alterations observed.	Moderate diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
Blackened areas on the edge of the spleen which are 1 cm wide.	Slight amount of lymphoid tissue. Slight amount of brown, granular pigment in the red pulp.
Mesenteric Lymph Node:	
No alterations observed.	Minimal amount of brown, granular pigment and macrophages chiefly within the medullary sinusoids.
Testis:	
No alterations observed.	Active spermatogenesis.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, stomach, large intestine, small intestine, pancreas, urinary bladder, and kidney.

GROUP NO. 4
Male Dog No. 14257

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly medium-sized follicles. Slight amount of parafollicular tissue. Moderate nonsuppurative thyroiditis with foci of lymphocytes and plasma cells in interstitial locations. Epithelium lining the normal follicles usually high cuboidal. Inflammatory exudate in a few cases spills over into the thyroid follicles.
Adrenal Gland:	
No alterations observed.	Moderate diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Minimal amount of lymphoid tissue and pigment. Minimal extramedullary hematopoiesis.
Kidney:	
No alterations observed.	Sectioning artifacts present; otherwise, not remarkable.
Testis:	
No alterations observed.	Active spermatogenesis.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity. Minimal amount of brown, granular pigment.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, stomach, large intestine, small intestine, pancreas, urinary bladder, and mesenteric lymph node.

GROUP NO. 1
Female Dog No. 14199

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly small- and medium-sized follicles. Minimal amount of parafollicular tissue. Epithelium lining the follicles often cuboidal in type.
Adrenal Gland:	
No alterations observed.	Slight diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Slight amount of lymphoid tissue. Minimal pigment in the red pulp. Slight extramedullary hematopoiesis.
Kidney:	
No alterations observed.	Minimal foci of mononuclear cell infiltration near the pelvis.
Ovary:	
No alterations observed.	Many developing Graafian follicles. Occasional regressing corpora lutea.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, and urinary bladder.

GROUP NO. 1
Female Dog No. 14219

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly small- to medium-sized follicles. Moderate amount of parafollicular tissue. Epithelium lining the follicles chiefly cuboidal in type.
Adrenal Gland:	
No alterations observed.	Moderately great diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Slight amount of lymphoid tissue. Occasional foci of extramedullary hematopoiesis. Slight amount of brown, granular pigment in red pulp.
Kidney:	
No alterations observed.	Minimal nonsuppurative pyelitis with collections of lymphocytes in the subepithelial stroma.
Pancreas:	
No alterations observed.	Minimal mononuclear cell infiltration surrounding one small pancreatic duct.
Ovary:	
No alterations observed.	Numerous developing Graafian follicles. Scattered, regressing corpora lutea.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, stomach, small intestine, large intestine, mesenteric lymph node, and urinary bladder.

GROUP NO. 1
Female Dog No. 14220

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly small- and medium-sized follicles. Slight amount of parafollicular tissue. Epithelium lining the follicles chiefly cuboidal.
Adrenal Gland:	
No alterations observed.	Moderately great diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
Small section.	Minimal amount of lymphoid tissue and brown, granular pigment in the red pulp. Slight extramedullary hematopoiesis.
Liver:	
No alterations observed.	Slight amount of brown, granular pigment within Kuppfer cells.
Kidney:	
Both kidneys have a light-brown zone at the junction of cortex and medulla.	Moderate amount of brown, granular pigment in cortical tubules.
Ovary:	
No alterations observed.	Numerous developing Graafian follicles. Occasional corpora lutea.
Bone Marrow:	
No alterations observed.	Moderately great hematogenic activity.

The following organs were not altered grossly or microscopically: gallbladder, heart, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, and urinary bladder.

GROUP NO. 2
Female Dog No. 14336

GROSS	MICROSCOPIC
Kidney:	
No alterations observed.	Moderate nonsuppurative pyelitis with infiltrations of chronic inflammatory cells involving the pelvic epithelium and the subepithelial stroma.
Heart:	
Subendocardial reddening in area of the septum of the left ventricle.	Foci of congestion in the subendocardium.

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 2
Female Dog No. 14337

The following organs were not altered grossly or microscopically: liver and kidney.

GROUP NO. 2
Female Dog No. 14338

Kidney:	
No alterations observed.	Minimal foci of chronic interstitial nephritis. Slight nonsuppurative pyelitis.

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 3
Female Dog No. 14331

GROSS	MICROSCOPIC
Kidney:	
No alterations observed.	Slight nonsuppurative pyelitis with collections of chronic inflammatory cells and occasional polymorphonuclear leukocytes.

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 3
Female Dog No. 14332

Kidney:	
No alterations observed.	Occasional tubules are ectatic and are filled with proteinaceous material.
	Minimal mononuclear cell infiltration involving the pelvis.
	Very minimal foci of chronic interstitial nephritis

The following organ was not altered grossly or microscopically: liver.

GROUP NO. 3
Female Dog No. 14335

Liver:	
No alterations observed.	Occasional foci of polymorphonuclear leukocyte infiltration surrounding some of the larger veins.

The following organ was not altered grossly or microscopically: kidney.

GROUP NO. 4
Female Dog No. 14274

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly medium- and small-sized follicles. Moderate amount of parafollicular tissue. The small follicles tend to aggregate into small clusters with a high cuboidal epithelium. Epithelium lining other follicles outside of these foci is usually cuboidal.
Adrenal Gland:	
No alterations observed.	Slight diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Small amount of lymphoid tissue. Moderate amount of brown, granular pigment in the red pulp. Slight extramedullary hematopoiesis.
Kidney:	
No alterations observed.	Slight nonsuppurative pyelitis.
Ovary:	
No alterations observed.	Numerous developing Graafian follicles. A few large corpora lutea.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, and urinary bladder.

GROUP NO. 4
Female Dog No. 14276

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly medium-sized follicles. Moderate amount of parafollicular tissue. Epithelium lining the follicles chiefly cuboidal.
Adrenal Gland:	
No alterations observed.	Moderate diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Slight amount of lymphoid tissue. A small siderotic nodule present. Moderate extramedullary hematopoiesis. Moderate amount of brown, granular pigment in the red pulp.
Gallbladder:	
No alterations observed.	Slight focal interstitial accumulations of mononuclear cells in the subepithelial stroma. Scattered macrophages with brown, granular pigment observed in these areas. A few lymphoid follicles.
Liver:	
No alterations observed.	Slight amount of brown, granular pigment within Kuppfer cells.
Kidney:	
No alterations observed.	Moderate nonsuppurative pyelitis. Collections of chronic inflammatory cells,

GROUP NO. 4
Female Dog No. 14276 (Continued)

GROSS	MICROSCOPIC
	chiefly lymphocytes, infiltrating the pelvic epithelium and the subepithelial stroma. Occasional foci of chronic interstitial nephritis.
Ovary:	
No alterations observed.	Numerous developing Graafian follicles. Several large corpora lutea.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity.

The following organs were not altered grossly or microscopically: heart, stomach, small intestine, large intestine, pancreas, mesenteric lymph node, and urinary bladder.

GROUP NO. 4
Female Dog No. 14282

GROSS	MICROSCOPIC
Thyroid:	
No alterations observed.	Chiefly small- and medium-sized follicles. Moderate amount of parafollicular tissue. Epithelium lining the follicles usually low cuboidal.
Adrenal Gland:	
No alterations observed.	Moderately great diffuse vacuolation of cells in the zona fasciculata.
Spleen:	
No alterations observed.	Small amount of lymphoid tissue. Slight amount of brown, granular pigment in the red pulp. Moderate extramedullary hematopoiesis.
Kidney:	
No alterations observed.	Minimal mononuclear cell infiltration involving the pelvis.
Mesenteric Lymph Node:	
Section missing.	
Ovary:	
No alterations observed.	Several large corpora lutea. Small numbers of developing Graafian follicles.
Uterus:	
Each uterine horn filled with clear fluid (1.5 cm in diameter).	Endometrium relatively thin.

GROUP NO. 4
Female Dog No. 14282 (Continued)

GROSS	MICROSCOPIC
	The lining uterine epithelium is vacuolated resembling that seen when under the influence of progesterone.
	Minimal foci of mononuclear cell infiltration in the endometrium.
Bone Marrow:	
No alterations observed.	Moderate hematogenic activity.
	Some sectioning artifacts.

The following organs were not altered grossly or microscopically: heart, gallbladder, liver, stomach, small intestine, large intestine, pancreas, urinary bladder.

KEY TO DETAILED HISTOPATHOLOGY INCIDENCE TABLE

N = No Section

X = Not Remarkable

A = Autolysis

P or ✓ = Present or Taken

0 = Absent

1 = Minimal

2 = Slight

3 = Moderate

4 = Moderate to Severe

5 = Severe

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

ORGANS	MALES AND FEMALES							
	GROUP NUMBER							
	1	2	3	4	1	2	3	4
ANIMAL NUMBER	14239	14241	14250	14258	14209	14231	14334	14281
THYROID								
Thyroiditis				P				
Follicle Size	3			3	3			3
Heighth of Follicular Epithelium	3			3	3			3
ADRENAL								
Vacuolation of Cells of Zona Fasciculata	2			2-3	2-3			2
HEART	X			X	X			X
GALLBLADDER	X			X	X			X
SPLEEN	X			X	X			X
IVER	X	X	X	X	X	X	X	X
KIDNEY	X				X		X	X
Pyelitis			P	P		P		
Regenerative Epithelium		P						
Swelling of Irregular Epithelium in Renal Papilla				P				
STOMACH	X				X			X
Gastritis				P				
PANCREAS	X			X	X			X
SMALL INTESTINE	X			A	X			X
LARGE INTESTINE	X			X	X			X
MESENTERIC LYMPH NODE	X			X	X			N
URINARY BLADDER	X			X				X
Cystitis		P						
Hemorrhage of Submucosal		P			P			
TESTIS								
Normal Activity	P			P				
OVARY								
Normal Activity					P			P
BONE MARROW								
Normal Hematogenic Activity	P			P	P			P
PITUITARY								
Cysts						P	P	

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

SACRIFICED AT 104 WEEKS

ORGANS	MALES GROUP NUMBER 1			2		
ANIMAL NUMBER	14116	14118	14240	14242	14243	14246
THYROID						
Epithelial Height	3	3	2			
Follicle Size	3	2	2			
Thyroiditis						
Parafollicular Tissue	2	2	1			
Foci of Small Follicles	P					
ADRENAL GLAND						
Vacuolation of Cells in Zona Fasciculata	3	3	3			
HEART	X	X	X			
Congestion						
SPLEEN						
Extramedullary Hematopoiesis	1		1			
Lymphoid Tissue	1	2	2			
Pigment	2	2	2			
Siderotic Nodule						
GALLBLADDER	X	X	X			
Lymphoid Infiltration						
LIVER	X	X	X	X	X	X
Pigment						
Focal Polymorphonuclear Infil.						
KIDNEY	X			X	X	X
Interstitial Nephritis			1			
Pyelitis, Nonsuppurative			3			
Mononuclear Cell Infil., Pelvis		P				
Ectatic Tubules						
Pigment						
STOMACH	X	X	X			
SMALL INTESTINE	X	X	X		X	
Congestion						
Glandular Ectasia						
LARGE INTESTINE	X	X	X		X	

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

SACRIFICED AT 104 WEEKS

MALES (CONTINUED)

ORGANS	GROUP NUMBER 1			GROUP NUMBER 2		
ANIMAL NUMBER	14116	14118	14240	14242	14243	14246
PANCREAS	X	X	X			
Mononuclear Cell Infiltration						
MESENTERIC LYMPH NODE	X	X	X			
Pigment						
URINARY BLADDER	X	X	X			
TESTIS						
Active Spermatogenesis	P	P	P			
Atrophy						
Orchitis						
Epididymitis						
BONE MARROW						
Hematogenic Activity	3	3	4			
Pigment						

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

SACRIFICED AT 104 WEEKS

ORGANS	MALES GROUP NUMBER 3			4		
ANIMAL NUMBER	13988	14245	14249	14252	14256	14257
THYROID						
Epithelial Height				2	3	4
Follicle Size				2	2	3
Thyroiditis						3
Parafollicular Tissue				1	3	2
Foci of Small Follicles						P
ADRENAL GLAND						
Vacuolation of Cells in Zona Fasciculata				3	3	3
HEART				X	X	X
Congestion						
SPLEEN						
Extramedullary Hematopoiesis						1
Lymphoid Tissue			2	2	2	1
Pigment				2	2	1
Siderotic Nodule			P			
GALLBLADDER				X	X	X
Lymphoid Infiltration						
LIVER	X	X	X	X	X	X
Pigment						
Focal Polymorphonuclear Infil.						
KIDNEY		X	A	X	X	A
Interstitial Nephritis	1					
Pyelitis, Nonsuppurative						
Mononuclear Cell Infil., Pelvis						
Ectatic Tubules						
Pigment						
STOMACH				X	X	X
SMALL INTESTINE				A	X	X
Congestion	P					
Glandular Ectasia				2		
LARGE INTESTINE				X	X	X

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

SACRIFICED AT 104 WEEKS

MALES (CONTINUED)

ORGANS	GROUP NUMBER 3			GROUP NUMBER 4		
ANIMAL NUMBER	13988	14245	14249	14252	14256	14257
PANCREAS				X	X	X
Mononuclear Cell Infiltration						
MESENTERIC LYMPH NODE				X		X
Pigment					1	
URINARY BLADDER				X	X	X
TESTIS						
Active Spermatogenesis					P	P
Atrophy				3		
Orchitis				2		
Epididymitis				3		
BONE MARROW						
Hematogenic Activity				3	3	3
igment						1

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

SACRIFICED AT 104 WEEKS

FEMALES

ORGANS	GROUP NUMBER 1			GROUP NUMBER 2		
ANIMAL NUMBER	14199	14219	14220	14336	14337	14338
THYROID						
Epithelial Height	3	3	3			
Follicle Size	2	2	2			
Thyroiditis						
Parafollicular Tissue	1	3	2			
Foci of Small Follicles						
ADRENAL GLAND						
Vacuolation of Cells in Zona Fasciculata	2	4	4			
HEART	X	X	X			
Congestion				P		
SPLEEN						
Extramedullary Hematopoiesis	2	2	2			
Lymphoid Tissue	2	2	1			
Pigment	1	2	1			
Siderotic Nodule						
GALLBLADDER	X	X	X			
Lymphoid Infiltration						
LIVER	X	X		X	X	X
Pigment			2			
Focal Polymorphonuclear Infil.						
KIDNEY					X	
Interstitial Nephritis						1
Pyelitis, Nonsuppurative		1		3		2
Mononuclear Cell Infil., Pelvis	P					
Ectatic Tubules						
Pigment			P			
STOMACH	X	X	X			
SMALL INTESTINE	X	X	X			
Congestion						
Glandular Ectasia						
LARGE INTESTINE	X	X	X			

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

SACRIFICED AT 104 WEEKS

FEMALES (CONTINUED)

ORGANS	GROUP NUMBER 1			GROUP NUMBER 2		
ANIMAL NUMBER	14199	14219	14220	14336	14337	14338
PANCREAS	X		X			
Mononuclear Cell Infiltration		1				
MESENTERIC LYMPH NODE	X	X	X			
Pigment						
URINARY BLADDER	X	X	X			
OVARY						
Graafian Follicles	P	P	P			
Corpora Lutea	P	P	P			
BONE MARROW						
Hematogenic Activity	3	3	4			
Pigment						
UTERUS						
Normal Activity						

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

SACRIFICED AT 104 WEEKS

FEMALES

ORGANS	GROUP NUMBER 3			GROUP NUMBER 4		
ANIMAL NUMBER	14331	14332	14335	14274	14276	14282
THYROID						
Epithelial Height				3	3	2
Follicle Size				2	3	2
Thyroiditis						
Parafollicular Tissue				3	3	3
Foci of Small Follicles				P		
ADRENAL GLAND						
Vacuolation of Cells in Zona Fasciculata				2	3	4
HEART				X	X	X
Congestion						
SPLEEN						
Extramedullary Hematopoiesis				2	3	3
Lymphoid Tissue				2	2	2
Pigment				3	3	2
Siderotic Nodule					P	
GALLBLADDER				X		X
Lymphoid Infiltration					P	
LIVER	X	X		X		X
Pigment					2	
Focal Polymorphonuclear Infil.			P			
KIDNEY			X			
Interstitial Nephritis		1			2	
Pyelitis, Nonsuppurative	2			2	3	
Mononuclear Cell Infil., Pelvis		P				P
Ectatic Tubules		P				
Pigment						
STOMACH				X	X	X
SMALL INTESTINE				X	X	X
Congestion						
Glandular Ectasia						
LARGE INTESTINE				X	X	X

DETAILED HISTOPATHOLOGY INCIDENCE TABLE

SACRIFICED AT 104 WEEKS
FEMALES (CONTINUED)

ORGANS	GROUP NUMBER 3			GROUP NUMBER 4		
ANIMAL NUMBER	14331	14332	14335	14274	14276	14282
PANCREAS				X	X	X
Mononuclear Cell Infiltration						
MESENTERIC LYMPH NODE				X	X	SM
Pigment						
URINARY BLADDER				X	X	X
OVARY						
Graafian Follicles				P	P	P
Corpora Lutea				P	P	P
BONE MARROW						A
Hematogenic Activity				3	3	3
Pigment						
UTERUS						
Normal Activity						P