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Industrial **BIO-TEST** *Laboratories, Inc.*
1810 FRONTAGE ROAD
NORTHBROOK, ILLINOIS 60062

BTL-71-70 #2

REPORT TO

MONSANTO COMPANY

TWO-YEAR CHRONIC ORAL TOXICITY STUDY WITH AROCLOR 1254 IN BEAGLE DOGS

NOVEMBER 1, 1971

IBT NO. C7299

0365884

TOXSTUDIES1198

Industrial BIO-TEST Laboratories, Inc.
1810 FRONTAGE ROAD
NORTHBROOK, ILLINOIS 60062

November 1, 1971

Mr. Elmer P. Wheeler
Monsanto Company
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166

Dear Mr. Wheeler:

Re: IBT No. C7299 - Two-Year Chronic Oral Toxicity Study With Aroclor 1254 In Beagle Dogs

We are submitting herewith our laboratory report dated November 1, 1971, prepared in connection with the above study.

Very truly yours,

J. C. Calandra
President

JCC:sjn

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REPORT TO

MONSANTO COMPANY

TWO-YEAR CHRONIC ORAL TOXICITY STUDY WITH AROCLOR 1254 IN BEAGLE DOGS

NOVEMBER 1, 1971

IBT NO. C7299

I. Introduction

A sample identified as Aroclor 1254, Lot #AK-38, was received from the Monsanto Company for the purpose of conducting a two-year chronic oral toxicity study using purebred beagle dogs. The following report presents the results of the investigation.

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II. Summary

Two years of feeding Aroclor 1254 at dietary levels of 1, 10 and 100 ppm to purebred beagle dogs revealed the following:

A. Body Weights

There were no consistent significant differences between the untreated control animals and animals in the three test groups with respect to body weights.

B. Food Consumption

The amounts of food consumed by the animals in the three test groups did not differ significantly from that consumed by the controls.

C. Behavioral Reactions

No untoward behavioral reactions were noted at any time during the investigation.

D. Mortality

Two fatalities occurred during the study, a 100 ppm female after 33 weeks of testing and a 10 ppm female after 37 weeks. The female receiving 100 ppm died from injuries received in a fight. Gross and histologic examinations of the 10 ppm female revealed moderate chronic peritonitis.

E. Hematologic Studies

No significant abnormalities were noted at any of the levels tested.

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F. Blood Chemistry Studies

Animals receiving Aroclor 1254 at all three dietary levels exhibited blood chemistry values comparable to those of the untreated control animals.

G. Urine Analyses

There were no significant differences between the urine of the test and untreated control dogs.

H. Pathologic Studies

1. Organ Weight Data

The organ weight data for the animals in the untreated control and three test groups did not differ significantly.

2. Gross and Histopathologic Findings

No consistent or dose related abnormalities attributable to the ingestion of Aroclor 1254 were noted among any of the animals.

Respectfully submitted,

INDUSTRIAL BIO-TEST LABORATORIES, INC.

Report prepared by: Bruce R Burtner
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Dog Toxicity

Report approved by: Dennis C Lindberg
Dennis C. Lindberg, B.S.
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Manager, Toxicology

November 1, 1971

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III. Procedure

A. Organization

The two year toxicity study utilized an untreated control group and three test groups, each consisting of eight purebred beagle dogs (four males and four females). The beagles were all eligible for A.K.C. registration and had been previously immunized against rabies, distemper, infectious canine hepatitis and leptospirosis.

All dogs were acquired from our own colony and were under observation for two weeks prior to the start of the investigation, during which time they were re-immunized and rendered clinically free of any existing parasitic infestation.

During the investigation, the selected animals were housed in kennels equipped with outside runs, four dogs of the same sex and group being accommodated in a single kennel.

The material to be tested, Aroclor 1254, was incorporated into a stock diet and fed to the dogs seven days a week at three graded dietary levels. The levels were 1, 10 and 100 ppm.

An outline of the test organization and diet composition is presented in Table I.

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TABLE I

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Test Organization and Diet Composition

Group	Number of Animals Tested		Dietary Constituents, percent (w/w)	
	Males	Females	Aroclor 1254	Stock Food*
UC	4	4	None	100.0000
I	4	4	0.0001	99.9999
II	4	4	0.0010	99.9990
III	4	4	0.0100	99.9900

* Purina Dog Meal, Ralston Purina Company, St. Louis, Missouri.

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B. Parameters Investigated

Initially, the body weight of each dog in every group was determined and recorded. Thereafter, weighings were conducted weekly for the duration of the test.

At the beginning of each week, the appropriate dietary constituents for each of the groups were thoroughly blended in a Hobart mixer. Pre-weighed amounts were distributed into self-feeding units and maintained in excess of the animals' consumption. One such unit was available to the dogs in each kennel for three hours each day. During these three-hour intervals, food was consumed on an ad libitum basis. At the end of each seven-day period, all unconsumed food was collected and weighed. Food consumption was then calculated and recorded. Water was available to the animals at all times.

The dogs were under observation during the investigation and were examined daily for clinical signs or symptoms indicative of systemic toxicity.

The following determinations were conducted upon each dog from the untreated control group and three test groups just prior to the inception of the study and after 1, 3, 6, 12, 18 and 24 months of testing:

Hematologic Studies

total leukocyte count
erythrocyte count
hemoglobin
hematocrit
differential leukocyte count

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Blood Chemistry Studies

blood urea nitrogen
serum glucose
serum alkaline phosphatase
serum glutamic - oxalacetic transaminase
serum glutamic - pyruvic transaminase

Urine Analyses

albumin
glucose
pH
specific gravity
microscopic elements - leukocytes
erythrocytes
crystals

At the conclusion of the investigation, the dogs from each group were sacrificed by electric shock. All major tissues and organs were examined grossly. The weights of the following organs were obtained: liver, kidneys, heart, brain, spleen, gonads, adrenal glands, thyroid gland and pituitary gland. The following tissues and organs excised from these animals were examined histologically (Hematoxylin-Eosin stain):

Adrenal glands
Aorta (thoracic)
Bone marrow (sternum)
Brain (cerebrum, cerebellum, pons)
Caecum
Colon
Esophagus
Gall bladder
Gonads
Heart
Kidneys
Liver
Lymph nodes (cervical, mesenteric)
Muscle
Pancreas
Peripheral nerve (sciatic)
Pituitary gland
Prostate gland
Salivary gland (submaxillary)
Small intestine (duodenum, jejunum, ileum)
Spinal cord
Spleen
Stomach (cardia, fundus, pylorus)
Trachea
Thyroid gland
Uterus
Urinary bladder

In addition, samples of liver, kidneys, muscle and fat were frozen and saved for chemical residue analyses.

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IV. Results

A. Body Weight Data

Body weight data are presented in Tables II and III.

It is noted that the mean overall weight gain for test group III males (100 ppm Aroclor 1254) is lower than that of untreated control males. However, the individual gains for untreated control males show a wide divergence, particularly for that of dog 4. Upon elimination of this animal's gain, it is felt that the overall mean weight gain for test group III males is comparable to that of untreated control males.

A similar situation is noted between untreated control and test groups III females. Upon eliminating divergent individual gains (animals 8 and 29) overall mean weight gains for the two groups are comparable.

It is felt, therefore, that weight gains in test group III are essentially comparable to those of untreated controls and that differences here or in lower levels are not the result of test material ingestion.

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TABLE II

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Males, kilograms

Group	Dietary Level (ppm)	Dog Number	Age at Inception of Test (months)	Body Weights at Week Indicated: 0	1	2	3	4	5	6	7	8	9	10	11	12
UC	None	1	6.5	6.4	6.5	6.8	6.8	6.8	7.0	6.9	7.0	6.8	7.0	7.2	7.3	7.4
		2	6.0	7.1	7.0	7.4	7.2	7.7	8.0	7.8	8.0	8.1	8.4	8.7	8.8	8.9
		3	4.8	6.3	6.6	6.9	7.1	7.3	7.5	7.3	7.8	8.3	8.2	8.3	8.8	8.8
		4	4.8	7.8	7.9	8.4	8.5	8.9	9.2	9.4	10.0	9.8	10.4	10.5	11.0	11.0
		Mean	5.5	6.9	7.0	7.4	7.4	7.7	7.9	7.9	8.2	8.2	8.5	8.7	9.0	9.0
I	1	9	9.0	10.0	10.2	10.5	11.0	11.2	11.3	11.4	11.3	11.7	12.0	12.4	12.4	12.2
		10	6.8	10.0	10.0	10.2	10.4	10.6	10.5	10.3	10.2	9.6	10.5	10.7	11.1	11.0
		11	6.5	9.3	9.8	10.0	10.3	10.2	10.2	10.4	10.5	11.0	11.2	11.5	11.8	11.6
		12	6.0	9.4	9.8	10.2	10.6	11.0	11.2	11.4	11.5	11.7	11.8	12.4	12.2	12.4
		Mean	7.1	9.7	10.0	10.2	10.6	10.8	10.8	10.9	10.9	11.0	11.4	11.8	11.9	11.8
II	10	17	6.5	7.7	8.0	8.4	8.7	9.0	9.2	9.3	9.5	9.8	9.9	10.2	10.9	10.7
		18	5.8	7.7	8.2	8.6	8.7	8.6	9.2	9.4	9.4	9.6	9.9	9.8	10.5	10.4
		19	4.8	6.9	7.1	7.4	7.8	8.1	8.4	8.7	8.8	9.1	9.2	9.6	9.9	10.1
		20	6.0	8.3	8.1	8.2	8.4	8.7	8.9	8.8	8.8	9.5	9.6	9.6	9.9	9.7
		Mean	5.8	7.6	7.8	8.2	8.4	8.6	8.9	9.0	9.1	9.5	9.6	9.8	10.3	10.2
III	100	25	6.8	6.7	6.8	7.1	7.3	7.4	7.3	7.3	7.4	7.6	7.4	7.5	7.2	7.6
		26	6.8	6.3	6.2	6.6	6.8	6.8	7.0	7.0	7.0	7.2	7.2	7.4	7.5	7.4
		27	6.0	7.0	7.1	7.2	7.3	7.3	7.2	7.1	7.0	6.8	6.4	5.8	6.0	6.0
		28	5.8	6.8	7.2	7.6	7.8	7.8	8.1	7.8	8.2	8.3	8.0	8.3	8.3	8.6
		Mean	6.4	6.7	6.8	7.1	7.3	7.3	7.4	7.3	7.4	7.5	7.2	7.2	7.2	7.4

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TABLE II continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Males, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 13	14	15	16	17	18	19	20	21	22	23	24	25	26
UC	None	1	7.1	7.5	7.3	7.3	7.4	7.4	7.2	6.9	7.1	7.0	7.2	7.1	7.2	7.0
		2	8.8	9.1	9.2	9.4	9.5	9.4	9.6	9.5	9.7	9.7	9.9	9.8	9.6	10.0
		3	8.8	9.0	9.2	9.1	9.6	9.4	9.7	9.6	9.7	9.6	10.1	9.6	9.9	9.9
		4	11.1	11.5	11.5	12.0	12.0	12.4	12.9	12.8	12.5	12.1	12.8	13.0	13.1	13.0
		Mean	9.0	9.3	9.3	9.4	9.6	9.6	9.8	9.7	9.8	9.6	10.0	9.9	10.0	10.0
I	1	9	12.2	12.4	12.0	12.3	12.6	12.4	12.7	12.4	12.6	12.5	12.8	13.3	12.7	12.7
		10	10.4	11.0	10.8	11.0	11.4	11.6	11.8	11.7	11.9	11.7	12.0	12.3	12.0	12.0
		11	11.5	12.0	12.0	12.0	12.0	12.3	12.4	12.4	12.3	12.3	12.6	12.8	12.5	12.5
		12	12.2	12.5	12.5	13.0	13.2	13.3	13.5	13.7	14.0	13.9	14.0	14.0	14.3	14.1
		Mean	11.6	12.0	11.8	12.1	12.3	12.4	12.7	12.6	12.7	12.6	12.8	13.1	12.9	12.8
II	10	17	10.6	10.8	10.7	11.1	11.1	11.5	11.4	11.6	11.5	11.5	11.6	11.6	11.7	11.5
		18	10.3	10.8	10.5	10.5	10.4	10.3	9.4	8.0	7.2	9.6	11.2	11.2	11.8	12.0
		19	10.0	10.3	10.4	10.6	10.5	10.8	10.9	10.9	10.7	10.6	11.0	10.9	11.1	11.1
		20	9.6	10.0	10.0	10.1	9.9	10.1	10.1	10.2	10.3	10.1	10.3	10.3	10.4	10.3
		Mean	10.1	10.5	10.4	10.6	10.6	10.7	10.4	10.2	9.9	10.4	11.0	11.0	11.2	11.2
III	100	25	7.5	7.7	7.6	7.6	7.3	7.5	7.5	7.5	7.8	7.6	7.8	7.7	7.7	7.7
		26	7.3	7.6	7.4	7.4	7.3	7.5	7.6	7.6	7.7	7.6	7.7	7.6	7.6	7.5
		27	6.0	6.3	6.3	6.3	6.3	6.6	6.8	6.9	7.1	7.1	7.2	7.3	7.4	7.3
		28	8.4	8.6	8.4	8.6	8.3	8.4	8.9	9.1	9.2	9.2	9.4	9.4	9.4	9.3
		Mean	7.3	7.6	7.4	7.5	7.3	7.5	7.7	7.8	8.0	7.9	8.0	8.0	8.0	8.0

Industrial BIO-TEST Laboratories, Inc.

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TABLE II continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Males, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 27	28	29	30	31	32	33	34	35	36	37	38	39	40
UC	None	1	7.4	6.9	7.2	7.0	7.1	7.2	7.2	7.2	7.1	7.5	7.4	7.4	7.3	7.1
		2	9.8	9.8	10.0	10.0	10.0	9.9	9.8	9.7	10.0	9.9	10.1	9.7	10.0	9.9
		3	9.9	9.8	10.0	10.0	10.0	9.9	9.7	9.7	10.0	10.2	10.2	10.2	10.3	10.2
		4	13.9	13.0	13.4	13.2	13.0	12.9	12.6	13.2	13.5	13.8	13.6	13.5	13.7	13.4
		Mean	10.2	9.9	10.2	10.0	10.0	10.0	9.8	10.1	10.2	10.4	10.3	10.2	10.3	10.2
I	1	9	12.8	12.9	12.9	12.8	12.7	12.0	12.1	12.5	12.8	12.6	12.3	12.2	12.0	12.3
		10	12.0	12.0	12.0	11.9	12.0	12.0	11.9	12.0	11.9	11.9	11.6	11.6	11.8	11.6
		11	12.6	12.7	12.6	12.8	12.7	12.6	12.2	12.2	12.5	12.3	12.5	12.5	12.8	13.1
		12	14.3	14.6	14.2	14.6	14.5	14.1	14.1	14.6	14.6	14.4	14.5	14.4	14.7	14.6
		Mean	12.9	13.0	12.9	13.0	13.0	12.7	12.6	12.8	13.0	12.8	12.7	12.7	12.8	12.9
II	10	17	11.6	11.3	11.5	11.3	11.3	11.2	11.3	11.5	11.6	11.7	11.5	11.6	11.5	11.5
		18	12.3	12.7	12.7	12.8	12.7	12.6	13.0	13.5	13.9	13.7	13.5	13.9	13.9	13.8
		19	11.2	11.1	11.0	11.0	10.9	10.7	10.8	10.9	11.2	11.4	11.3	11.0	11.2	10.9
		20	10.4	10.3	10.7	10.5	10.5	10.4	10.6	10.8	10.7	10.7	10.4	10.5	10.5	10.5
		Mean	11.4	11.4	11.5	11.4	11.4	11.2	11.4	11.7	11.8	11.9	11.7	11.8	11.8	11.7
III	100	25	7.8	7.9	7.6	7.7	7.7	7.8	7.9	7.5	7.8	8.0	8.0	8.2	8.1	8.1
		26	7.5	7.6	7.5	7.5	7.5	7.5	7.5	7.6	7.7	7.8	7.8	7.8	8.0	7.5
		27	7.7	7.8	7.5	7.6	7.5	7.5	7.6	7.6	7.7	7.9	7.8	7.8	7.8	7.8
		28	9.1	9.3	9.3	9.4	9.4	9.4	9.5	9.5	9.6	10.0	9.8	9.8	9.8	9.8
		Mean	8.0	8.2	8.0	8.0	8.0	8.0	8.1	8.0	8.2	8.4	8.4	8.4	8.4	8.3

Submitted BIO-TEST Laboratories, Inc.

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TABLE II continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Males, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 41	42	43	44	45	46	47	48	49	50	51	52	53	54
UC	None	1	7.4	7.5	7.6	7.5	7.4	7.4	7.5	7.5	7.8	7.5	7.5	7.9	7.8	7.6
		2	10.0	10.0	10.0	9.9	10.0	10.0	10.1	10.0	10.4	10.1	9.7	9.9	10.4	10.2
		3	10.2	10.4	10.2	10.4	10.2	10.1	10.4	10.3	10.5	10.1	10.3	10.7	10.6	10.4
		4	13.5	13.6	13.6	13.5	13.4	13.2	13.4	13.3	13.7	13.6	13.8	14.1	14.4	14.4
		Mean	10.3	10.4	10.4	10.3	10.2	10.2	10.4	10.3	10.6	10.3	10.3	10.6	10.8	10.6
I	1	9	12.1	12.0	12.6	12.6	12.3	12.4	12.7	12.7	12.7	12.6	12.4	12.6	13.1	13.1
		10	11.7	12.0	12.3	12.2	12.0	12.0	12.1	12.1	12.5	12.3	12.5	12.5	12.6	12.3
		11	12.5	12.8	13.0	13.1	13.0	12.9	13.1	13.2	13.4	13.3	13.0	13.2	13.3	13.1
		12	14.0	14.3	14.6	14.7	14.9	15.1	15.2	15.5	15.6	15.3	15.5	15.8	16.0	15.6
		Mean	12.6	12.8	13.1	13.2	13.0	13.1	13.3	13.4	13.6	13.4	13.4	13.5	13.8	13.5
II	10	17	11.6	11.8	12.0	11.9	11.7	11.6	11.9	11.8	12.2	12.1	11.9	12.3	12.1	12.1
		18	13.8	14.3	14.3	14.3	13.8	13.8	14.3	14.1	14.5	14.2	14.2	14.4	14.4	14.3
		19	11.0	11.2	11.5	11.6	11.1	11.2	11.7	11.7	11.7	11.6	11.5	12.0	12.0	12.2
		20	10.5	10.3	10.4	10.6	10.6	10.5	10.7	10.6	10.7	11.0	10.6	10.9	10.7	10.7
		Mean	11.7	11.9	12.0	12.1	11.8	11.8	12.2	12.0	12.2	12.2	12.0	12.4	12.3	12.3
III	100	25	8.0	8.0	8.0	8.1	7.9	7.8	7.8	7.3	7.5	7.3	7.3	7.6	7.3	7.2
		26	7.9	7.9	7.9	8.0	7.8	7.8	7.9	7.7	7.9	7.6	7.8	7.6	7.8	7.8
		27	7.8	8.0	8.0	8.0	7.9	7.9	8.0	8.0	8.0	8.0	8.0	8.1	8.2	8.1
		28	9.2	8.7	9.0	9.4	9.5	9.2	9.6	9.5	9.4	9.3	9.5	9.9	9.9	9.9
		Mean	8.2	8.2	8.2	8.4	8.3	8.2	8.3	8.1	8.2	8.0	8.2	8.3	8.3	8.2

Submitted BIO-TEST Laboratories, Inc.

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TOXSTUDIES1211

TABLE II continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Males, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 55	56	57	58	59	60	61	62	63	64	65	66	67	68
UC	None	1	7.5	7.7	7.7	8.0	7.8	7.8	7.9	7.8	7.9	7.9	7.6	7.8	8.1	8.0
		2	10.0	10.2	10.1	10.1	10.2	10.1	10.2	10.1	10.2	10.3	10.0	10.0	10.3	10.1
		3	10.2	10.3	10.2	10.4	10.4	10.5	10.3	10.1	10.1	10.1	10.4	10.4	10.4	10.5
		4	14.0	14.0	14.1	14.0	14.2	14.1	14.4	14.1	14.0	14.1	14.2	14.2	14.3	14.2
		Mean	10.4	10.6	10.5	10.6	10.6	10.6	10.7	10.5	10.6	10.6	10.6	10.6	10.8	10.7
I	1	9	12.5	12.8	12.2	12.5	12.6	12.5	12.4	12.9	13.2	12.6	12.7	12.7	12.8	12.6
		10	12.5	12.8	12.3	12.5	12.4	12.3	12.2	12.2	12.3	12.2	12.2	12.6	12.6	12.3
		11	13.2	13.3	13.1	13.0	12.8	13.0	13.2	13.1	13.3	13.0	12.9	13.3	13.3	13.1
		12	15.5	15.4	15.4	15.4	14.7	15.2	15.3	15.5	15.4	14.5	14.7	15.0	15.2	14.9
		Mean	13.4	13.6	13.2	13.4	13.1	13.3	13.3	13.4	13.6	13.1	13.1	13.4	13.5	13.2
II	10	17	12.2	12.2	11.9	12.1	12.0	11.9	12.1	12.0	12.1	11.9	11.6	11.9	12.0	11.8
		18	14.7	14.3	14.3	14.4	14.5	14.3	14.3	14.2	14.4	14.4	14.2	14.5	14.4	14.3
		19	11.9	12.2	12.0	12.1	12.2	12.2	12.2	12.1	12.0	12.0	11.9	12.2	12.3	12.2
		20	10.3	10.6	10.6	10.6	10.7	10.7	10.7	10.5	10.6	10.7	10.5	10.7	10.8	10.6
		Mean	12.3	12.3	12.2	12.3	12.4	12.3	12.3	12.2	12.3	12.2	12.0	12.3	12.4	12.2
III	100	25	7.5	7.7	7.8	8.1	8.0	8.0	7.9	8.1	7.9	8.0	7.9	8.0	8.1	8.2
		26	7.7	7.7	7.6	7.7	7.8	7.9	7.8	8.0	7.9	7.9	7.7	7.8	7.8	7.8
		27	7.8	7.8	7.9	7.8	7.8	7.8	7.9	7.9	7.7	7.8	7.6	7.9	7.8	7.7
		28	9.7	9.5	9.6	9.5	9.6	9.7	9.8	9.6	9.5	9.4	9.4	9.8	9.3	9.2
		Mean	8.2	8.2	8.2	8.3	8.3	8.4	8.4	8.4	8.2	8.3	8.2	8.4	8.2	8.2

Industrial BIO-TEST Laboratories, Inc.

0365898

TOXSTUDIES1212

TABLE II continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Males, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 69	70	71	72	73	74	75	76	77	78	79	80	81	82
UC	None	1	7.8	8.1	8.1	7.6	7.6	7.9	7.8	7.8	7.8	7.4	7.5	7.4	7.6	7.6
		2	9.9	9.9	10.3	9.7	10.0	10.1	10.1	10.1	10.0	9.7	9.7	9.2	9.2	9.3
		3	10.5	10.5	10.5	10.2	10.5	10.4	10.4	10.5	10.4	10.2	10.2	9.9	9.9	10.2
		4	14.2	14.4	14.5	14.1	14.4	14.5	14.3	14.4	14.4	14.1	14.1	13.2	13.4	13.5
		Mean	10.6	10.7	10.8	10.4	10.6	10.7	10.6	10.7	10.6	10.4	10.4	9.9	10.0	10.2
I	1	9	13.0	13.0	12.7	12.6	12.8	12.8	12.6	12.8	12.5	12.7	12.9	12.5	13.0	13.0
		10	12.5	12.6	12.5	12.2	12.4	12.2	12.0	12.0	11.8	11.7	11.9	11.6	12.0	11.9
		11	13.1	13.1	12.9	12.9	13.0	13.0	13.0	13.0	13.0	13.1	13.1	12.9	12.6	12.6
		12	15.5	15.6	15.4	15.7	16.0	16.2	15.7	15.9	15.9	15.6	16.0	16.2	16.2	16.0
		Mean	13.5	13.6	13.4	13.4	13.6	13.7	13.3	13.4	13.3	13.3	13.5	13.3	13.4	13.4
II	10	17	12.0	11.9	11.8	11.8	12.0	12.1	12.0	12.1	12.0	11.9	12.1	12.0	12.0	12.2
		18	14.5	15.0	14.8	14.5	14.5	14.5	14.6	14.6	14.5	14.5	14.5	14.6	14.5	14.2
		19	12.0	12.1	12.2	12.1	12.3	12.4	12.0	12.3	12.1	12.0	11.7	11.5	11.9	11.5
		20	10.5	10.7	10.7	10.8	10.7	10.4	10.8	10.8	10.8	10.9	11.1	10.5	10.5	10.8
		Mean	12.2	12.4	12.4	12.3	12.4	12.4	12.4	12.4	12.4	12.3	12.4	12.2	12.2	12.2
III	100	25	8.0	8.4	8.3	8.4	8.2	8.3	8.6	8.5	8.3	8.0	8.4	7.9	7.9	7.8
		26	7.9	8.0	7.9	7.9	7.8	7.9	8.0	7.9	7.9	7.9	7.9	7.5	7.7	7.6
		27	7.7	8.1	8.0	7.9	7.9	8.2	8.1	8.0	8.0	8.1	8.1	7.8	7.9	8.2
		28	9.3	9.6	9.7	9.8	9.2	9.4	9.4	8.9	9.0	9.1	9.5	9.2	9.5	9.4
		Mean	8.2	8.5	8.5	8.5	8.3	8.4	8.5	8.3	8.3	8.3	8.5	8.1	8.2	8.2

0365894

TOXSTUDIES1213

TABLE II continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Males, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 83	84	85	86	87	88	89	90	91	92	93	94	95
UC	None	1	7.4	7.6	7.6	7.6	7.6	7.6	7.6	7.6	8.0	7.5	7.6	7.8	7.7
		2	9.5	9.4	9.6	9.9	9.9	10.0	10.0	9.9	10.4	10.0	10.3	9.9	10.2
		3	10.2	10.2	10.1	10.5	10.5	10.4	10.2	10.5	10.6	10.5	10.5	10.5	10.4
		4	13.9	13.6	13.9	14.0	14.1	14.2	14.3	14.5	15.0	14.4	14.8	14.8	15.2
		Mean	10.2	10.2	10.3	10.5	10.5	10.6	10.5	10.6	11.0	10.6	10.8	10.8	10.9
I	1	9	13.0	12.6	12.8	12.5	12.4	12.0	11.6	12.0	12.0	12.0	12.3	12.5	12.9
		10	12.0	12.0	12.0	12.4	12.2	12.2	12.3	12.5	12.9	12.5	12.5	12.5	12.7
		11	13.0	13.2	13.0	13.5	13.1	13.1	13.5	13.1	13.3	13.2	13.0	13.2	13.2
		12	16.3	16.3	16.2	16.0	16.0	15.9	15.9	16.4	17.3	16.9	17.0	17.1	17.0
		Mean	13.6	13.5	13.5	13.6	13.4	13.3	13.3	13.5	13.9	13.6	13.7	13.8	14.0
II	10	17	12.2	12.2	12.1	12.2	12.2	12.2	12.3	12.4	12.7	12.4	12.5	12.5	12.7
		18	13.6	14.5	14.5	14.7	14.7	14.7	14.6	14.8	14.9	14.2	14.4	14.5	14.7
		19	11.7	11.6	11.5	11.5	11.7	11.9	12.0	12.1	12.5	12.2	12.2	12.2	12.0
		20	10.7	10.9	10.8	10.6	10.6	10.5	10.4	10.9	11.0	11.0	10.9	10.7	10.9
		Mean	12.0	12.3	12.2	12.2	12.3	12.3	12.3	12.6	12.8	12.4	12.5	12.5	12.6
III	100	25	8.3	8.5	8.5	8.6	8.5	8.5	8.4	8.3	8.5	8.3	8.5	8.4	8.7
		26	7.5	7.8	7.6	7.8	7.8	7.8	7.8	8.0	8.0	7.9	7.8	7.6	8.0
		27	8.2	7.9	8.0	8.0	8.0	8.0	7.7	8.0	7.9	7.6	7.8	8.0	8.0
		28	9.2	9.5	9.6	9.4	9.2	9.2	9.3	9.7	9.5	9.5	9.5	9.5	9.6
		Mean	8.3	8.4	8.4	8.4	8.4	8.4	8.3	8.5	8.5	8.3	8.4	8.4	8.6

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TOXSTUDIES1214

TABLE II continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Males, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 96	97	98	99	100	101	102	103	104	Overall Weight Gain
UC	None	1	7.8	7.8	7.6	7.6	7.6	7.5	7.6	7.7	7.6	1.2
		2	10.0	10.0	9.8	10.0	9.8	9.8	9.9	10.9	10.0	2.9
		3	10.2	10.2	10.1	10.0	10.1	10.1	10.2	10.3	10.4	4.1
		4	15.0	14.7	14.5	14.2	14.4	14.4	14.4	14.6	14.8	7.0
		Mean	10.8	10.7	10.5	10.4	10.5	10.4	10.5	10.6	10.6	3.7
I	1	9	12.8	13.2	13.0	13.3	13.0	13.2	13.1	13.0	13.2	3.2
		10	12.4	12.5	12.0	12.5	12.1	12.2	12.5	12.1	12.4	2.4
		11	13.1	13.1	13.0	13.0	13.1	12.9	13.1	13.0	13.3	4.0
		12	17.1	17.3	17.0	17.1	16.9	16.8	16.9	17.0	17.1	7.7
		Mean	13.8	14.0	13.8	14.0	13.8	13.8	13.9	13.8	14.0	4.3
II	10	17	12.5	12.5	12.2	12.3	12.1	12.2	12.3	12.5	12.4	4.7
		18	14.0	14.5	14.3	14.2	14.1	14.4	14.6	14.5	14.5	6.8
		19	12.2	12.2	11.5	11.6	11.6	11.7	11.9	12.0	11.7	4.8
		20	10.7	10.7	10.2	10.9	10.9	10.7	10.4	10.7	10.9	2.6
		Mean	12.4	12.5	12.0	12.2	12.2	12.2	12.3	12.4	12.4	4.8
III	100	25	8.6	8.7	8.5	8.6	8.6	8.2	8.3	8.5	8.7	2.0
		26	7.8	8.0	7.5	8.2	8.0	8.1	8.1	8.0	8.0	1.7
		27	8.0	8.0	8.3	7.6	7.6	7.6	7.7	8.0	8.2	1.2
		28	9.6	9.2	9.5	9.6	9.5	9.7	9.6	9.7	9.8	3.0
		Mean	8.5	8.5	8.4	8.5	8.4	8.4	8.4	8.6	8.7	2.0

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TOXSTUDIES1215

TABLE III

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Females, kilograms

Group	Dietary Level (ppm)	Dog Number	Age at Inception of Test (months)	Body Weights at Week Indicated: 0	1	2	3	4	5	6	7	8	9	10	11	12
UC	None	5	6.0	6.4	6.6	6.8	6.8	7.1	7.3	7.2	7.5	7.4	7.5	7.5	7.3	6.7
		6	6.0	7.1	7.5	7.8	7.9	8.2	8.4	8.8	9.0	8.9	8.9	8.9	9.0	9.0
		7	4.8	6.5	6.4	6.9	7.2	7.3	7.4	7.4	7.8	7.7	7.7	7.7	7.9	8.1
		8	4.8	7.2	7.4	7.7	7.8	8.2	8.3	8.2	8.8	8.8	9.2	9.3	9.7	9.8
		Mean	5.4	6.8	7.0	7.3	7.4	7.7	7.8	7.9	8.2	8.2	8.3	8.4	8.5	8.4
I	1	13	6.8	8.3	8.3	8.4	8.3	8.5	8.6	8.7	8.5	8.6	8.9	9.2	9.1	9.2
		14	6.8	8.7	9.3	9.2	9.5	9.5	9.5	9.4	9.8	10.0	9.6	9.8	9.9	10.1
		15	6.0	9.3	9.6	9.6	9.7	9.7	10.1	9.9	10.3	10.4	10.5	10.5	10.7	10.9
		16	6.0	8.7	8.8	8.8	9.2	9.5	9.6	9.3	9.8	9.7	10.0	9.8	10.0	9.8
		Mean	6.4	8.8	9.0	9.0	9.2	9.3	9.4	9.3	9.6	9.7	9.8	9.8	9.9	10.0
II	10	21	6.5	6.3	6.5	6.7	6.8	7.0	6.9	7.1	7.4	7.1	7.4	7.3	7.6	7.5
		22	6.0	6.2	6.5	6.6	6.7	6.7	6.9	6.7	7.1	7.3	7.2	7.1	7.3	7.2
		23	5.8	7.2	7.5	7.7	7.9	7.9	8.1	8.3	8.4	8.4	8.2	8.3	8.4	8.6
		24	6.0	6.3	6.4	6.6	6.7	7.0	7.2	7.0	7.4	7.4	7.4	7.7	7.6	7.6
		Mean	6.1	6.5	6.7	6.9	7.0	7.2	7.3	7.3	7.6	7.6	7.6	7.6	7.7	7.7
III	100	29	6.5	6.9	6.9	6.8	7.0	6.9	7.1	7.0	7.1	7.2	7.3	7.1	7.3	7.1
		30	6.5	7.4	7.8	8.0	8.1	8.1	8.5	8.3	8.6	8.6	8.7	8.9	9.0	9.0
		31	6.5	5.9	5.8	6.0	6.1	6.2	6.2	6.2	6.4	6.3	6.4	6.5	6.5	6.5
		32	5.8	7.4	7.5	7.7	8.0	8.2	8.6	8.7	9.1	9.4	9.3	9.4	9.9	9.9
		Mean	6.3	6.9	7.0	7.1	7.3	7.4	7.6	7.6	7.8	7.9	7.9	8.0	8.2	8.1

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TOXSTUDIES1216

TABLE III continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Females, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 13	14	15	16	17	18	19	20	21	22	23	24	25	26
UC	None	5	6.2	6.5	7.0	7.3	7.5	7.8	8.0	7.9	8.1	8.1	8.2	8.3	8.3	8.1
		6	9.0	9.0	9.1	9.1	9.3	9.1	9.3	9.5	9.5	9.4	9.6	9.4	9.5	9.5
		7	7.9	8.2	8.2	8.3	8.3	8.5	8.8	8.5	8.9	8.7	8.9	8.7	8.7	8.8
		8	9.9	10.1	10.2	10.3	10.4	10.5	10.5	10.2	10.4	10.4	10.9	10.9	10.9	10.9
		Mean	8.2	8.4	8.6	8.8	8.9	9.0	9.2	9.0	9.2	9.2	9.4	9.3	9.4	9.3
I	1	13	9.4	9.6	9.0	8.6	8.4	8.3	8.9	9.0	8.6	8.9	9.2	9.5	9.2	9.1
		14	9.8	10.1	9,8	10.0	9.7	9.8	10.1	10.0	10.4	10.0	10.5	10.5	10.2	10.1
		15	10.7	11.0	10.6	10.8	10.6	10.5	11.1	10.9	11.1	11.0	11.4	11.1	11.1	11.0
		16	9.5	9.7	9.8	9.9	10.2	10.4	10.7	10.6	10.9	10.6	10.9	11.1	11.0	11.0
		Mean	9.9	10.1	9.8	9.8	9.7	9.8	10.2	10.1	10.2	10.1	10.5	10.6	10.4	10.3
II	10	21	7.4	7.7	7.8	8.0	8.0	7.8	8.0	7.9	8.1	8.0	8.1	7.9	8.6	8.0
		22	6.7	7.0	7.1	7.2	7.2	7.4	7.6	7.4	7.6	7.6	7.8	7.6	8.1	7.9
		23	8.2	8.4	8.5	8.5	8.5	8.5	8.6	8.7	8.6	8.6	8.5	8.5	8.5	8.5
		24	7.1	7.6	7.5	7.6	7.5	7.7	7.9	7.8	7.9	7.7	8.0	7.8	8.3	7.8
		Mean	7.4	7.7	7.7	7.8	7.8	7.8	8.0	8.0	8.0	8.0	8.2	8.0	8.4	8.0
III	100	29	7.1	7.2	7.3	7.4	7.3	7.6	7.6	6.7	7.6	7.5	7.3	7.6	7.8	7.6
		30	9.1	9.3	9.3	9.6	9.4	9.4	9.4	9.5	9.4	9.0	9.3	9.4	9.5	9.4
		31	6.5	6.7	6.5	6.7	6.8	6.6	6.7	6.9	7.0	6.8	7.0	7.1	7.1	6.9
		32	9.7	9.6	9.7	9.8	9.9	10.2	10.5	10.6	10.7	10.5	10.7	10.8	10.9	10.7
		Mean	8.1	8.2	8.2	8.4	8.3	8.4	8.6	8.4	8.7	8.4	8.6	8.7	8.8	8.6

TOXSTUDIES1217

TABLE III continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Females, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 27	28	29	30	31	32	33	34	35	36	37	38	39	40
UC	None	5	8.3	8.3	8.3	8.4	8.5	8.6	8.5	8.5	8.9	8.5	8.4	8.4	8.6	8.5
		6	9.5	9.5	9.5	9.8	9.8	9.8	9.4	9.5	9.9	9.6	9.7	9.6	9.9	10;0
		7	8.8	8.9	9.2	9.1	9.2	9.3	9.2	9.1	9.3	9.3	9.2	9.0	9.0	9.1
		8	11.0	10.9	10.9	11.0	10.8	10.4	10.8	10.8	10.6	10.5	10.4	10.4	10.7	10.6
		Mean	9.4	9.4	9.5	9.6	9.5	9.5	9.5	9.5	9.7	9.5	9.4	9.4	9.6	9.6
I	1	13	9.1	9.2	8.7	8.7	8.7	8.8	8.7	8.3	8.3	9.0	8.5	8.6	8.6	9.0
		14	10.2	10.4	10.0	10.5	10.4	10.2	9.8	9.5	9.4	9.6	10.2	9.6	9.7	9.5
		15	10.9	10.8	11.0	11.1	11.0	10.6	11.2	11.4	11.6	11.8	11.6	11.1	11.2	10.8
		16	11.1	11.1	10.9	11.1	11.0	11.0	10.9	11.3	11.3	12.0	11.9	11.2	11.7	11.6
		Mean	10.3	10.4	10.2	10.4	10.3	10.2	10.2	10.1	10.2	10.6	10.6	10.1	10.3	10.2
II	10	21	8.1	8.1	8.2	8.1	8.0	8.0	7.9	8.0	8.4	8.5	8.3	8.2	8.3	8.3
		22	7.2	7.3	7.5	7.4	7.4	7.5	7.4	7.5	7.6	7.7	7.5	7.4	7.4	7.5
		23*	8.6	8.6	8.5	8.3	8.3	8.3	8.3	8.5	8.0	6.8	5.8	-	-	-
		24	8.0	8.0	8.5	7.9	7.9	8.0	8.0	8.0	8.2	8.2	8.1	8.1	8.1	8.2
		Mean	8.0	8.0	8.2	7.9	7.9	8.0	7.9	8.0	8.0	7.8	7.4	7.9	7.9	8.0
III	100	29	7.6	7.6	7.5	7.8	7.4	7.3	7.3	7.2	7.5	7.5	7.5	7.3	7.4	7.3
		30	9.4	9.5	9.4	9.4	9.4	9.3	9.2	9.2	9.4	9.6	9.5	9.5	9.6	9.6
		31**	6.8	6.6	6.5	6.5	6.4	6.4	6.0	-	-	-	-	-	-	-
		32	10.5	10.5	10.5	10.6	10.5	10.3	10.3	10.3	10.5	10.8	10.7	10.8	10.7	10.8
		Mean	8.6	8.6	8.5	8.6	8.4	8.3	8.2	8.9	9.1	9.3	9.2	9.2	9.2	9.2

Industrial BIO-TEST Laboratories, Inc.

TOXSTUDIES1218

TABLE III continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Females, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 41	42	43	44	45	46	47	48	49	50	51	52	53	54
UC	None	5	9.0	8.7	8.7	8.6	8.6	8.6	8.8	9.0	9.2	8.9	9.2	9.0	9.0	9.0
		6	10.7	10.4	10.4	10.3	10.1	10.0	10.1	10.2	10.3	9.8	10.0	9.7	9.7	9.7
		7	9.5	9.1	9.3	9.2	8.8	8.9	9.2	9.4	9.3	9.0	9.2	9.4	9.5	9.3
		8	11.2	11.0	11.2	11.2	11.1	10.8	11.4	11.5	11.8	11.1	11.5	11.5	11.7	11.9
		Mean	10.1	9.8	9.9	9.8	9.6	9.6	9.9	10.0	10.2	9.7	10.0	9.9	10.0	10.0
I	1	13	9.3	9.6	10.2	10.2	9.5	9.5	10.1	10.3	10.1	10.2	10.5	10.8	11.3	11.2
		14	9.8	10.2	10.1	10.2	9.9	9.9	10.0	10.2	10.7	10.5	10.4	10.9	10.9	10.6
		15	11.0	10.9	11.1	11.1	10.9	11.0	11.0	11.2	11.3	11.1	11.4	11.3	11.5	11.4
		16	11.4	12.0	11.9	11.8	11.7	11.5	11.5	11.4	11.8	11.5	11.5	11.7	11.6	11.6
		Mean	10.4	10.7	10.8	10.8	10.5	10.5	10.6	10.8	10.9	10.8	11.0	11.2	11.3	11.2
II	10	21	8.5	8.5	8.9	8.8	8.6	8.5	8.9	9.1	9.1	8.9	9.2	9.0	8.7	8.6
		22	7.5	7.5	7.7	7.7	7.7	7.6	7.7	7.7	7.8	7.6	7.6	7.6	7.6	7.7
		23*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		24	8.2	8.1	8.2	8.1	7.9	7.9	8.1	8.2	8.3	8.1	8.2	8.1	8.2	8.8
		Mean	8.1	8.0	8.3	8.2	8.1	8.0	8.2	8.3	8.4	8.2	8.3	8.2	8.2	8.4
III	100	29	7.5	7.4	7.6	7.6	7.4	7.4	7.5	7.7	8.0	7.8	7.9	7.8	7.9	7.9
		30	9.7	9.8	10.0	9.8	9.5	9.5	9.7	9.7	9.8	9.5	9.5	9.5	9.6	9.5
		31**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		32	10.9	11.0	11.1	11.1	11.0	11.1	11.4	11.3	11.6	11.4	11.3	11.3	11.6	11.3
		Mean	9.4	9.4	9.6	9.5	9.3	9.3	9.5	9.6	9.8	9.6	9.6	9.5	9.7	9.6

Industrial BIO-TEST Laboratories, Inc.

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TOXSTUDIES1219

TABLE III continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Females, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 55	56	57	58	59	60	61	62	63	64	65	66	67	68
UC	None	5	8.6	9.1	8.9	8.8	8.7	8.5	8.8	8.5	8.9	8.7	8.7	8.6	8.8	8.9
		6	9.5	9.5	9.4	9.6	9.6	9.7	9.7	9.6	9.8	9.8	9.8	9.9	10.1	10.1
		7	8.9	9.3	9.6	9.4	9.7	9.9	9.9	9.8	9.7	10.0	9.9	10.0	9.9	9.6
		8	11.7	11.9	11.9	11.9	12.1	12.1	12.3	11.9	11.8	11.5	11.4	11.2	11.9	11.9
		Mean	9.7	10.0	10.0	9.9	10.0	10.0	10.2	10.0	10.0	10.0	10.0	9.9	10.2	10.1
I	1	13	11.6	12.1	12.0	12.7	12.4	13.0	13.2	13.3	13.3	13.2	13.1	13.1	13.0	12.8
		14	10.5	10.8	10.7	10.7	10.7	10.6	10.7	10.7	11.0	11.1	11.4	11.4	11.7	11.5
		15	11.3	11.5	11.6	11.7	11.8	11.8	11.9	11.9	12.1	12.2	12.2	12.4	12.5	12.6
		16	11.6	12.1	11.8	11.6	11.8	11.6	12.0	11.8	12.0	12.3	12.2	12.5	12.4	12.3
		Mean	11.2	11.6	11.5	11.7	11.7	11.8	12.0	11.9	12.1	12.2	12.2	12.4	12.4	12.3
II	10	21	8.9	8.8	8.9	8.7	8.8	8.8	8.9	9.1	9.0	9.0	8.8	8.9	9.1	9.0
		22	7.6	7.4	7.6	7.6	7.6	7.6	7.5	7.5	7.4	7.5	7.5	7.7	7.7	7.6
		23*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		24	8.0	7.8	7.9	7.8	7.8	7.8	7.9	7.6	8.0	8.0	7.9	8.0	8.3	8.2
		Mean	8.2	8.0	8.1	8.0	8.1	8.1	8.1	8.1	8.1	8.2	8.1	8.2	8.4	8.3
III	100	29	7.8	7.9	7.7	7.6	7.4	7.2	7.3	7.5	7.4	7.4	7.3	7.6	7.5	7.5
		30	9.5	9.6	9.5	9.7	9.7	9.7	9.8	9.8	9.8	9.8	9.8	9.8	10.2	10.1
		31**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		32	11.2	11.2	11.0	11.1	11.0	10.9	10.7	10.7	10.7	10.4	10.5	10.8	10.7	11.0
		Mean	9.5	9.6	9.4	9.5	9.4	9.3	9.3	9.3	9.3	9.2	9.2	9.4	9.5	9.5

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TOXSTUDIES1220

TABLE III continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Females, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 69	70	71	72	73	74	75	76	77	78	79	80	81	82
UC	None	5	8.6	8.8	8.9	9.0	9.2	9.1	9.1	9.0	9.0	9.2	9.3	9.2	8.9	9.4
		6	10.3	10.4	10.3	10.3	10.5	10.7	10.4	10.3	10.3	10.5	10.6	10.0	10.2	10.0
		7	9.6	9.7	9.5	9.4	9.5	9.4	9.5	9.4	9.2	9.4	9.3	9.0	9.2	9.4
		8	11.8	12.1	12.0	11.6	12.2	11.9	12.0	12.1	12.3	12.1	12.2	11.9	12.2	12.2
		Mean	10.1	10.2	10.2	10.1	10.4	10.3	10.2	10.2	10.2	10.3	10.4	10.0	10.1	10.2
I	1	13	11.8	12.4	12.4	12.7	12.9	12.9	12.5	12.6	12.6	12.6	12.6	12.2	12.6	12.5
		14	11.5	11.8	11.9	11.5	11.8	11.6	11.4	11.5	11.1	11.4	11.2	10.6	11.2	11.1
		15	12.5	12.6	12.7	12.5	12.7	12.3	12.1	12.4	12.0	12.4	12.4	12.2	12.3	12.2
		16	12.1	12.2	12.4	12.4	12.0	11.9	11.8	12.1	11.9	12.5	12.2	12.0	12.2	12.2
		Mean	12.0	12.2	12.4	12.3	12.4	12.2	12.0	12.2	11.9	12.2	12.1	11.8	12.1	12.0
II	10	21	9.2	9.0	9.0	9.0	9.2	9.1	9.0	9.0	9.1	9.0	9.2	9.1	9.2	9.3
		22	7.8	8.0	7.8	8.0	8.0	8.1	8.2	8.1	8.1	7.9	8.0	7.9	7.6	7.5
		23*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		24	8.2	8.5	8.3	8.2	8.2	8.0	7.9	7.9	7.9	7.9	8.1	7.9	8.1	8.1
		Mean	8.4	8.5	8.4	8.4	8.5	8.4	8.4	8.3	8.4	8.3	8.4	8.4	8.3	8.3
III	100	29	7.6	7.6	7.6	7.5	7.6	7.5	7.3	7.5	7.6	7.5	7.6	7.5	7.6	7.6
		30	10.1	10.4	10.2	10.0	10.2	10.1	9.8	9.9	9.7	9.8	9.8	9.7	9.3	9.6
		31**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		32	10.9	11.0	11.0	10.7	11.0	10.8	10.8	11.1	11.1	11.1	11.3	10.9	11.2	11.2
		Mean	9.5	9.7	9.6	9.4	9.6	9.5	9.3	9.5	9.5	9.5	9.5	9.4	9.4	9.5

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TOXSTUDIES1221

TABLE III continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Females, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 83	84	85	86	87	88	89	90	91	92	93	94	95
UC	None	5	9.1	9.4	9.9	10.0	9.8	9.7	9.7	9.6	9.9	9.5	9.5	9.2	9.2
		6	10.0	10.3	9.6	10.1	10.1	10.1	10.5	10.5	11.0	10.1	10.5	10.5	10.5
		7	9.5	9.9	10.0	10.0	10.0	9.9	10.1	10.2	10.9	10.0	9.9	9.7	10.0
		8	12.2	12.6	12.5	12.8	12.5	12.3	12.7	12.9	13.0	12.5	11.7	12.4	12.4
		Mean	10.2	10.6	10.5	10.7	10.6	10.5	10.8	10.8	11.0	10.5	10.4	10.4	10.5
I	1	13	12.5	12.5	12.4	12.6	12.6	12.8	13.0	13.5	14.0	13.5	13.7	13.7	13.9
		14	11.2	11.1	10.9	11.2	11.0	11.0	10.8	10.8	11.5	11.3	11.5	11.5	11.5
		15	12.4	12.4	12.6	13.0	13.0	13.0	12.9	13.0	13.2	13.1	13.0	13.0	13.5
		16	12.2	12.3	12.4	12.7	12.4	12.2	12.8	13.9	13.2	13.9	13.0	13.0	13.0
		Mean	12.1	12.1	12.1	12.4	12.2	12.2	12.4	12.6	13.0	12.7	12.8	12.8	13.0
II	10	21	9.2	9.2	9.2	9.4	9.2	8.9	9.0	8.9	9.0	8.8	8.9	8.7	8.7
		22	7.5	7.5	7.6	7.8	8.0	8.0	8.0	8.0	8.0	7.5	7.8	7.8	7.7
		23*	-	-	-	-	-	-	-	-	-	-	-	-	-
		24	8.3	8.2	8.5	8.3	8.3	8.3	8.1	8.5	8.5	8.2	8.2	8.2	8.7
		Mean	8.3	8.3	8.4	8.5	8.5	8.4	8.4	8.5	8.5	8.2	8.3	8.2	8.4
III	100	29	7.6	7.8	7.7	7.9	7.7	7.4	7.4	7.5	7.6	7.4	7.5	7.5	7.8
		30	9.7	9.6	9.6	9.9	9.9	9.9	10.0	10.4	10.5	10.3	10.2	10.2	10.2
		31**	-	-	-	-	-	-	-	-	-	-	-	-	-
		32	11.2	11.3	11.2	11.2	11.1	11.0	10.8	10.8	10.6	10.8	10.7	11.2	11.1
		Mean	9.5	9.6	9.5	9.7	9.6	9.4	9.4	9.6	9.6	9.5	9.5	9.6	9.7

TOXSTUDIES1222

TABLE III continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Body Weight Data for Females, kilograms

Group	Dietary Level (ppm)	Dog Number	Body Weights at Week Indicated: 96	97	98	99	100	101	102	103	104	Overall Weight Gain
UC	None	5	9.2	9.0	8.9	9.2	9.3	9.0	9.3	9.1	9.2	2.8
		6	10.4	10.3	10.5	10.3	10.3	10.4	10.6	10.4	10.6	3.5
		7	9.9	9.5	9.7	9.3	9.5	9.2	9.6	9.4	9.5	3.0
		8	12.2	12.4	12.5	12.5	12.6	12.5	12.4	12.4	12.5	5.3
		Mean	10.4	10.3	10.4	10.3	10.4	10.3	10.4	10.3	10.4	3.1
I	1	13	13.7	13.5	13.5	13.3	13.1	12.9	13.1	13.3	13.1	4.8
		14	11.5	11.2	11.5	11.6	11.5	11.1	11.4	11.5	11.6	3.9
		15	13.4	13.1	13.2	13.2	13.3	13.2	13.0	12.8	13.1	3.8
		16	12.9	12.8	12.8	13.0	12.8	12.5	12.3	12.7	12.6	3.9
		Mean	12.9	12.6	12.8	12.8	12.7	12.4	12.4	12.6	12.6	3.8
II	10	21	8.7	9.0	8.7	8.9	8.6	8.6	8.7	8.8	8.9	2.6
		22	7.1	6.5	6.3	6.6	6.8	7.1	7.3	7.5	7.8	1.6
		23*	-	-	-	-	-	-	-	-	-	(-1.4)
		24	8.5	8.4	8.2	8.0	8.1	8.0	8.2	8.3	8.4	2.1
		Mean	8.1	8.0	7.7	7.8	7.8	7.9	8.1	8.2	8.4	2.1
III	100	29	7.8	7.6	7.5	7.8	7.6	7.4	7.6	7.7	7.6	0.7
		30	10.2	10.2	10.2	10.0	10.1	9.8	10.9	10.1	10.0	2.6
		31**	-	-	-	-	-	-	-	-	-	(0.1)
		32	11.3	11.4	11.3	11.6	11.3	11.0	11.1	11.3	11.1	3.2
		Mean	9.8	9.7	9.7	9.8	9.7	9.4	9.6	9.7	9.6	2.4

* animal died after 37 weeks of testing.

** animal died after 33 weeks of testing.

Note: Overall weight gains for animals that died during the study are in parentheses and are not included in the calculations [illegible]

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TOXSTUDIES1223

B. Food Consumption Data

Food consumption data are presented in Table IV. No significant abnormalities were noted at any of the levels tested.

TOXSTUDIES1224

TABLE IV

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Food Consumption Data

	Mean Food Consumed During Week Indicated (gm/kg of body weight)							
Sex:	Males				Females			
Group:	UC	I	II	III	UC	I	II	III
Week Dietary Level (ppm):	None	1	10	100	None	1	10	100
1	268	238	256	272	282	258	284	261
2	290	260	308	268	277	247	272	268
3	287	269	298	223	290	244	296	243
4	305	255	273	212	276	247	257	257
5	285	243	281	196	279	239	250	260
6	323	252	333	274	348	322	339	336
7	201	197	209	182	180	185	174	135
8	280	261	287	187	274	276	256	244
9	244	231	171	293	300	297	387	192
10	253	252	276	208	262	250	266	272
11	244	210	243	167	209	247	227	213
12	261	254	172	220	265	268	250	241
13	267	218	223	164	238	232	199	231
14	296	231	257	184	235	260	214	238
15	253	229	240	176	276	232	204	232
16	287	244	257	203	304	224	266	247
17	253	244	233	219	250	209	244	229
18	286	242	234	250	306	247	247	262
19	278	266	204	263	293	270	272	247
20	237	232	159	237	269	260	266	286
21	242	242	245	266	282	289	259	253
22	234	222	243	247	264	265	244	238
23	282	234	273	250	279	260	268	262
24	250	233	252	228	255	243	219	267
25	235	223	259	316	253	197	289	224
26	245	244	239	228	372	218	212	232
27	245	236	219	231	316	238	259	227

TOXSTUDIES1225

TABLE IV continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Food Consumption Data

		Mean Food Consumed During Week Indicated (gm/kg of body weight)							
	Sex:	Males				Females			
	Group:	UC	I	II	III	UC	I	II	III
Week	Dietary Level (ppm):	None	1	10	100	None	1	10	100
28		300	244	270	271	292	243	278	267
29		262	227	243	238	266	245	229	238
30		252	240	241	269	281	260	270	256
31		260	221	248	269	281	240	266	256
32		332	280	279	317	368	274	351	376
33		214	245	279	277	239	263	240	235
34		254	266	275	272	308	277	303	277
35		282	269	297	253	286	279	256	297
36		260	213	183	250	237	278	199	240
37		252	234	224	238	271	229	206	261
38		248	238	242	229	260	205	262	254
39		255	264	239	259	258	240	266	250
40		216	232	207	211	281	252	238	228
41		267	216	254	207	287	267	272	294
42		267	236	248	232	258	280	262	259
43		255	267	250	253	270	280	253	281
44		238	256	248	259	255	278	248	235
45		292	246	248	277	271	257	280	283
46		243	229	233	241	263	255	229	244
47		238	259	242	223	252	257	240	238
48		250	242	227	222	260	268	237	236
49		231	220	215	198	228	261	182	238
50		235	205	221	212	191	208	228	222
51		226	213	196	226	245	223	233	243
52		212	241	222	229	225	241	220	249
53		250	217	203	217	235	212	203	247
54		233	202	207	210	232	208	218	260

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TOXSTUDIES1226

TABLE IV continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Food Consumption Data

		Mean Food Consumed During Week Indicated (gm/kg of body weight)							
	Sex:	Males				Females			
	Group:	UC	I	II	III	UC	I	II	III
Week	Dietary Level (ppm):	None	1	10	100	None	1	10	100
55		168	196	181	198	209	210	183	179
56		224	197	209	220	232	244	208	222
57		238	186	215	238	228	270	222	238
58		208	185	187	208	217	233	200	214
59		233	206	212	220	220	246	214	245
60		205	212	181	211	222	218	198	222
61		215	210	195	220	211	231	214	222
62		178	188	143	176	188	202	189	201
63		193	219	183	195	208	233	226	236
64		212	168	188	205	225	232	220	194
65		186	227	185	195	212	218	206	236
66		208	213	201	202	212	192	220	227
67		222	207	212	222	220	206	210	232
68		217	193	195	198	213	197	201	210
69		215	224	199	232	208	156	214	235
70		231	200	200	247	218	231	220	261
71		206	192	194	196	198	232	218	245
72		204	194	195	203	220	187	198	213
73		210	219	204	226	226	175	204	229
74		229	215	204	223	216	199	198	204
75		224	235	188	256	208	167	167	158
76		222	213	206	202	211	217	237	256
77		229	239	208	244	233	206	226	260
78		204	258	185	304	250	236	301	200
79		219	239	226	253	243	248	230	246

0365913

TOXSTUDIES1227

TABLE IV continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Food Consumption Data

		Mean Food Consumed During Week Indicated (gm/kg of body weight)							
	Sex:	Males				Females			
	Group:	UC	I	II	III	UC	I	II	III
Week	Dietary Level (ppm):	None	1	10	100	None	1	10	100
80		240	244	236	231	222	265	246	252
81		262	261	238	265	235	248	289	266
82		277	246	219	277	235	223	273	256
83		274	247	254	262	233	248	261	263
84		265	237	224	250	233	244	277	236
85		286	231	236	259	257	236	258	281
86		300	250	248	259	243	242	274	271
87		262	205	217	199	262	217	216	205
88		250	231	232	235	226	211	230	273
89		231	205	197	229	248	206	238	227
90		264	241	234	253	243	214	216	264
91		261	228	199	220	204	210	167	229
92		191	202	181	220	171	183	154	210
93		224	230	194	235	161	189	193	256
94		259	236	220	232	195	223	203	271
95		229	232	204	235	200	221	206	271
96		211	208	202	229	183	205	177	252
97		222	193	212	244	214	192	188	258
98		224	228	208	247	209	211	177	251
99		224	236	217	265	218	205	235	265
100		243	212	205	241	219	181	226	236
101		221	214	199	214	209	181	219	213
102		236	221	196	246	213	196	198	258
103		228	217	208	235	217	207	213	261
104		241	226	213	238	191	213	217	248
Mean		246	231	227	235	246	236	232	247

TOXSTUDIES1228

C. Reactions

No abnormal behavioral reactions were noted at any of the levels tested.

D. Mortality

There were two fatalities during the study, a female (no. 31) receiving 100 ppm died after 33 weeks of testing and a female (no. 23) receiving 10 ppm died after 37 weeks. In the 100 ppm animal, the cause of death was attributed to severe traumatic injuries sustained in a fight. Histologic examination of the tissues from this dog revealed no abnormalities. In the 10 ppm animal, gross and histopathologic examinations of the tissues revealed a moderate chronic peritonitis.

No other fatalities occurred during the study.

E. Hematologic Studies

The results of these determinations are presented in Tables V through IX. Dashes in the tables indicate animals that died during the study. No significant abnormalities were noted at any of the levels tested.

The high total leukocyte counts noted frequently among test group III animals (100 ppm Aroclor 1254) are not considered a response to test material ingestion since the values are within the upper limits of the normal range in this laboratory.

TOXSTUDIES1229

TABLE V

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Total Leukocyte Count, thousands/mm^3

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	14.7	13.6	12.7	12.9	15.5	9.2	10.4
		2-M	18.3	19.7	19.4	19.1	19.0	16.3	14.0
		3-M	9.4	15.6	11.0	10.5	11.6	13.2	9.1
		4-M	18.8	21.2	15.5	13.6	15.2	12.4	11.9
		5-F	15.4	13.7	27.6	22.0	11.5	9.5	10.6
		6-F	11.6	16.5	14.1	18.7	16.6	14.6	12.4
		7-F	21.7	18.1	10.3	17.7	15.5	11.4	10.6
		8-F	12.0	14.7	10.8	19.7	16.0	10.8	12.6
I	1	9-M	10.5	18.2	12.8	9.4	11.6	12.6	11.5
		10-M	7.0	10.9	11.7	9.9	12.2	12.4	15.0
		11-M	10.9	11.7	11.8	12.0	12.6	13.6	13.6
		12-M	15.4	17.3	17.9	15.3	20.8	16.9	15.5
		13-F	13.6	15.9	16.7	12.4	21.1	15.7	14.7
		14-F	12.8	12.3	13.0	15.1	16.6	16.7	16.2
		15-F	12.2	11.1	12.1	17.4	11.3	10.8	14.8
		16-F	14.5	11.5	14.0	14.1	15.8	12.7	12.8
II	10	17-M	11.9	13.2	14.7	15.8	16.2	15.0	14.2
		18-M	11.7	17.6	15.2	16.4	17.1	25.8	16.9
		19-M	13.5	19.4	15.3	15.2	14.2	15.8	18.4
		20-M	9.0	13.5	14.0	14.4	12.9	13.3	13.0
		21-F	14.8	17.4	21.9	13.5	22.8	10.2	12.9
		22-F	13.9	21.5	26.3	14.0	15.5	11.8	12.9
		23-F	13.7	16.7	22.0	15.8	-	-	-
		24-F	12.6	24.8	13.9	12.5	11.8	10.8	11.0
III	100	25-M	16.3	19.4	17.9	19.2	25.6	17.8	19.8
		26-M	23.3	29.8	18.3	22.6	28.3	25.1	29.1
		27-M	16.5	22.9	N/A	23.9	27.0	24.1	24.6
		28-M	15.3	18.9	15.2	14.2	24.3	22.1	19.4
		29-F	13.0	24.8	17.5	14.0	17.5	20.7	17.0
		30-F	13.1	24.4	22.7	17.0	17.3	16.8	19.7
		31-F	13.3	24.6	18.0	17.0	-	-	-
		32-F	26.4	21.7	15.6	13.4	17.5	15.3	14.5

N/A - data not available.

TOXSTUDIES1230

TABLE VI

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Erythrocyte Count, millions/mm^3

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	6.09	6.73	6.80	6.35	7.92	7.21	6.78
		2-M	5.69	5.76	6.40	6.45	8.37	6.69	7.10
		3-M	5.96	6.14	5.76	6.95	8.13	6.68	7.22
		4-M	5.83	5.98	5.32	6.11	7.44	7.13	7.16
		5-F	5.23	6.05	5.50	7.23	8.36	6.84	6.58
		6-F	5.41	5.89	6.04	6.63	7.42	6.27	6.71
		7-F	5.48	5.95	6.08	6.93	7.61	7.08	6.75
		8-F	5.43	5.86	6.35	6.67	7.33	7.12	6.72
I	1	9-M	6.51	6.41	6.65	6.88	7.44	6.63	6.99
		10-M	5.10	5.35	5.45	6.11	6.54	6.34	6.62
		11-M	5.74	5.61	5.98	6.58	6.97	6.88	6.54
		12-M	5.51	5.93	6.23	6.65	7.06	7.05	7.05
		13-F	5.66	6.03	6.05	6.24	6.67	6.52	5.55
		14-F	5.84	6.48	6.50	6.50	7.80	6.70	6.05
		15-F	5.68	6.05	6.23	6.03	7.64	6.43	6.14
		16-F	6.16	6.23	6.54	6.60	7.96	7.25	7.58
II	10	17-M	5.23	5.46	5.36	5.86	6.53	6.61	6.30
		18-M	6.18	5.80	5.78	6.09	7.15	7.04	6.83
		19-M	5.71	5.64	5.78	6.56	6.83	6.90	6.86
		20-M	6.09	5.24	6.29	6.35	7.10	6.91	6.90
		21-F	6.29	7.08	6.83	6.78	7.99	7.40	7.40
		22-F	5.45	5.83	5.18	6.43	7.31	6.45	6.27
		23-F	5.68	6.24	5.75	6.30	-	-	-
		24-F	5.86	6.48	6.31	6.34	7.85	6.46	6.79
III	100	25-M	5.96	5.63	5.64	6.14	5.10	6.07	6.66
		26-M	5.60	4.90	5.61	6.20	6.20	6.13	6.19
		27-M	5.21	4.69	N/A	6.14	6.21	6.30	6.05
		28-M	6.00	5.88	6.01	6.90	6.67	6.34	6.77
		29-F	5.84	6.44	6.01	5.89	7.15	5.93	6.54
		30-F	5.83	6.34	6.36	6.01	6.91	6.28	5.88
		31-F	6.81	7.15	6.96	6.76	-	-	-
		32-F	5.50	6.28	6.18	6.82	7.99	6.92	7.37

N/A - data not available.

0365917

TOXSTUDIES1231

TABLE VII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Hemoglobin, gm/100 ml

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	15.8	16.7	17.5	16.2	17.6	17.6	16.4
		2-M	13.2	13.0	14.6	13.8	15.8	15.2	15.7
		3-M	14.4	12.9	14.3	16.2	16.6	15.3	16.1
		4-M	14.3	12.9	13.0	14.9	16.4	17.2	16.9
		5-F	14.8	15.8	13.6	17.7	17.3	16.8	16.3
		6-F	14.4	14.2	14.7	15.9	15.1	15.5	15.7
		7-F	13.8	13.5	14.8	15.9	15.3	16.5	15.7
		8-F	13.8	14.1	14.6	15.9	14.9	16.6	15.8
I	1	9-M	18.2	15.9	17.4	17.7	16.0	16.5	16.9
		10-M	15.4	14.7	14.6	15.4	13.7	15.4	15.9
		11-M	14.2	14.0	14.4	15.8	14.3	17.0	15.5
		12-M	14.0	14.7	15.4	16.0	15.2	16.8	16.9
		13-F	14.6	14.7	15.4	16.5	14.1	15.5	13.7
		14-F	15.0	15.4	16.6	17.1	16.8	17.1	14.4
		15-F	15.2	14.9	16.9	16.0	17.4	16.5	15.3
		16-F	15.3	16.5	17.0	17.7	16.9	17.7	18.2
II	10	17-M	12.4	12.9	13.4	14.9	14.3	16.3	15.7
		18-M	16.1	14.2	14.2	14.2	15.1	16.3	15.7
		19-M	15.4	13.1	15.0	16.5	14.5	16.8	16.4
		20-M	15.4	13.9	14.8	16.9	16.0	17.0	16.7
		21-F	16.0	18.1	17.0	17.6	16.8	18.4	17.8
		22-F	13.8	14.2	13.0	16.3	16.1	16.5	15.4
		23-F	14.8	15.2	14.6	15.3	-	-	-
		24-F	14.6	14.5	15.9	15.9	16.5	15.7	15.8
III	100	25-M	13.9	13.4	16.4	14.6	10.6	15.3	15.7
		26-M	13.0	11.9	14.0	15.8	13.5	15.6	14.8
		27-M	13.5	11.9	N/A	16.0	14.0	15.5	14.7
		28-M	13.7	13.7	15.0	16.6	14.3	15.1	16.0
		29-F	14.7	15.4	14.6	14.3	15.4	14.4	15.2
		30-F	14.8	15.8	16.2	15.5	15.3	16.8	14.8
		31-F	16.8	17.5	18.4	17.2	-	-	-
		32-F	15.6	15.2	16.2	17.5	18.0	17.3	17.8

N/A - data not available.

0365918

TOXSTUDIES1232

TABLE VIII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Hematocrit, percent

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	47	48	50	47	56	50	47
		2-M	39	39	44	42	56	44	46
		3-M	41	39	42	46	54	43	46
		4-M	43	38	38	44	51	48	48
		5-F	43	45	40	52	56	48	47
		6-F	43	43	42	49	52	43	46
		7-F	41	40	42	47	52	47	46
		8-F	41	40	41	47	50	48	46
I	1	9-M	48	48	51	51	53	47	49
		10-M	44	42	42	45	46	44	45
		11-M	42	40	43	45	48	48	44
		12-M	38	42	44	48	49	48	48
		13-F	43	42	43	48	48	45	40
		14-F	45	44	47	50	55	48	42
		15-F	44	44	46	46	55	48	44
		16-F	46	46	46	50	56	51	53
II	10	17-M	38	38	40	42	46	43	44
		18-M	44	42	43	41	47	46	44
		19-M	42	39	44	48	48	48	47
		20-M	44	40	43	48	50	48	48
		21-F	48	49	47	49	56	52	52
		22-F	41	37	38	47	53	46	46
		23-F	43	44	41	45	-	-	-
		24-F	44	44	46	47	54	44	47
III	100	25-M	41	41	47	44	39	43	47
		26-M	40	35	41	43	44	44	44
		27-M	41	35	N/A	46	45	45	42
		28-M	42	41	44	49	46	43	45
		29-F	43	42	42	43	50	40	45
		30-F	45	44	45	45	51	46	43
		31-F	51	51	50	50	-	-	-
		32-F	46	43	45	50	57	48	52

N/A - data not available.

0365919

TOXSTUDIES1233

TABLE IX .

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Differential Leukocyte Count, percent - Neutrophils

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	68	55	55	57	64	56	67
		2-M	62	65	65	58	59	67	58
		3-M	53	59	51	49	48	72	56
		4-M	74	65	65	62	59	68	64
		5-F	64	43	81	72	44	49	53
		6-F	44	55	57	68	75	58	52
		7-F	85	51	56	73	58	58	61
		8-F	56	46	54	70	65	68	63
I	1	9-M	59	59	64	58	46	56	56
		10-M	66	61	56	55	59	70	75
		11-M	60	56	44	50	46	63	68
		12-M	58	70	64	71	72	78	60
		13-F	73	57	67	78	65	69	61
		14-F	52	47	65	67	58	61	71
		15-F	69	54	58	72	55	51	63
		16-F	47	49	51	51	48	65	57
II	10	17-M	63	58	66	70	58	70	66
		18-M	57	59	65	59	68	71	65
		19-M	50	51	54	60	58	58	64
		20-M	58	50	42	63	59	63	61
		21-F	53	61	69	55	71	54	59
		22-F	62	54	81	57	54	54	68
		23-F	58	64	84	78	-	-	-
		24-F	52	52	64	60	44	52	65
III	100	25-M	62	62	51	53	89	51	60
		26-M	71	64	61	69	77	58	76
		27-M	59	76	N/A	66	60	75	67
		28-M	70	68	69	81	76	75	74
		29-F	64	66	57	58	61	54	61
		30-F	51	67	58	61	56	53	53
		31-F	60	76	71	67	-	-	-
		32-F	62	58	58	62	64	58	60

N/A - data not available.

0365920

TOXSTUDIES1234

TABLE IX continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Differential Leukocyte Count, percent - Lymphocytes

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	28	38	43	36	28	35	27
		2-M	33	27	28	29	32	31	36
		3-M	43	37	40	42	46	24	34
		4-M	22	26	31	29	31	29	28
		5-F	25	52	19	23	52	43	39
		6-F	49	36	37	26	24	40	37
		7-F	13	40	41	22	40	35	35
		8-F	34	43	39	23	25	28	31
I	1	9-M	34	30	31	31	37	36	27
		10-M	28	34	36	34	32	26	16
		11-M	32	39	51	43	47	34	27
		12-M	29	26	31	24	24	19	36
		13-F	19	38	29	22	31	23	33
		14-F	36	47	31	23	35	30	21
		15-F	22	44	33	26	41	45	32
		16-F	44	47	44	37	39	26	34
II	10	17-M	29	30	28	27	38	26	32
		18-M	34	36	29	33	27	24	21
		19-M	38	44	41	30	36	38	23
		20-M	28	34	47	23	26	29	31
		21-F	39	36	29	39	24	35	36
		22-F	28	37	17	40	43	41	29
		23-F	39	34	13	18	-	-	-
		24-F	38	46	29	28	47	36	32
III	100	25-M	32	33	43	42	10	44	33
		26-M	28	29	37	27	17	37	23
		27-M	35	22	N/A	32	33	18	22
		28-M	24	30	28	13	18	24	21
		29-F	30	30	38	32	33	40	31
		30-F	37	30	38	32	35	44	38
		31-F	31	18	27	28	-	-	-
		32-F	30	40	35	29	31	30	34

N/A - data not available.

TOXSTUDIES1235

TABLE IX continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Differential Leukocyte Count, percent - Monocytes

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	1	2	1	2	2	2	0
		2-M	2	4	2	1	6	0	1
		3-M	0	1	0	3	3	1	2
		4-M	2	2	0	2	2	0	2
		5-F	3	0	0	0	2	1	2
		6-F	2	2	1	2	0	0	1
		7-F	0	2	1	1	0	2	0
		8-F	4	7	0	2	1	0	2
I	1	9-M	1	2	0	3	5	2	1
		10-M	2	0	2	6	2	0	2
		11-M	3	0	1	1	1	0	1
		12-M	1	0	1	0	2	1	0
		13-F	1	0	2	0	0	1	0
		14-F	6	0	0	6	2	1	2
		15-F	5	0	1	0	0	0	0
		16-F	1	1	1	2	1	0	0
II	10	17-M	0	0	0	0	2	0	0
		18-M	4	1	3	2	3	1	0
		19-M	5	2	0	5	0	0	6
		20-M	1	0	3	2	3	2	0
		21-F	0	0	0	0	2	0	0
		22-F	4	3	0	2	1	2	1
		23-F	0	0	0	2	-	-	-
		24-F	4	1	0	4	0	2	0
III	100	25-M	0	5	4	1	0	0	3
		26-M	1	3	0	0	4	0	0
		27-M	3	1	N/A	1	0	4	4
		28-M	1	0	1	4	4	0	3
		29-F	2	1	0	2	0	1	3
		30-F	1	0	0	0	0	0	2
		31-F	3	2	0	1	-	-	-
		32-F	6	1	0	5	0	2	1

N/A - data not available.

TOXSTUDIES1236

TABLE IX continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Differential Leukocyte Count, percent - Eosinophils

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	3	5	1	5	5	7	6
		2-M	3	4	5	2	2	2	5
		3-M	4	3	9	6	2	3	6
		4-M	2	6	3	7	8	3	4
		5-F	8	5	0	5	2	7	6
		6-F	5	7	4	4	1	2	10
		7-F	2	7	2	4	2	5	4
		8-F	6	4	7	5	9	4	4
I	1	9-M	6	9	5	8	10	6	14
		10-M	4	5	6	5	7	4	7
		11-M	5	5	3	6	6	3	4
		12-M	12	4	4	5	2	2	4
		13-F	7	5	2	0	4	7	5
		14-F	6	6	4	4	5	7	4
		15-F	4	2	8	2	4	4	4
		16-F	8	3	4	10	10	7	9
II	10	17-M	8	12	6	3	1	4	2
		18-M	5	4	3	6	2	3	9
		19-M	7	3	5	5	6	4	5
		20-M	13	16	8	12	12	6	8
		21-F	8	3	2	6	3	10	4
		22-F	6	6	2	1	2	2	2
		23-F	3	2	3	2	-	-	-
		24-F	6	1	7	7	9	10	3
III	100	25-M	5	0	2	4	1	5	2
		26-M	0	4	2	4	1	5	1
		27-M	3	1	N/A	1	6	2	6
		28-M	5	2	2	2	2	1	2
		29-F	4	3	5	8	5	5	5
		30-F	11	3	4	7	9	3	7
		31-F	6	4	2	4	-	-	-
		32-F	2	1	5	4	4	9	5

N/A - data not available.

TOXSTUDIES1237

TABLE IX continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Hematologic Studies: Differential Leukocyte Count, percent - Basophils

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	0	0	0	0	1	0	0
		2-M	0	0	0	0	1	0	0
		3-M	0	0	0	0	1	0	2
		4-M	0	1	1	0	0	0	2
		5-F	0	0	0	0	0	0	0
		6-F	0	0	1	0	0	0	0
		7-F	0	0	0	0	0	0	0
		8-F	0	0	0	0	0	0	0
I	1	9-M	0	0	0	0	2	0	2
		10-M	0	0	0	0	0	0	0
		11-M	0	0	1	0	0	0	0
		12-M	0	0	0	0	0	0	0
		13-F	0	0	0	0	0	0	1
		14-F	0	0	0	0	0	1	2
		15-F	0	0	0	0	0	0	1
		16-F	0	0	0	0	2	2	0
II	10	17-M	0	0	0	0	1	0	0
		18-M	0	0	0	0	0	1	5
		19-M	0	0	0	0	0	0	2
		20-M	0	0	0	0	0	0	0
		21-F	0	0	0	0	0	1	1
		22-F	0	0	0	0	0	1	0
		23-F	0	0	0	0	-	-	-
		24-F	0	0	0	1	0	0	0
III	100	25-M	1	0	0	0	0	0	2
		26-M	0	0	0	0	1	0	0
		27-M	0	0	N/A	0	1	1	1
		28-M	0	0	0	0	0	0	0
		29-F	0	0	0	0	1	0	0
		30-F	0	0	0	0	0	0	0
		31-F	0	0	0	0	-	-	-
		32-F	0	0	2	0	1	1	0

N/A - data not available.

TOXSTUDIES1238

F. Blood Chemistry Studies

The results of these determinations are presented in Tables X through XIV. Dashes in the tables indicate animals that have died during the study. No significant abnormalities were noted at any of the levels tested.

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TOXSTUDIES1239

TABLE X

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Blood Chemistry Studies: Blood Urea Nitrogen, mg/100 ml

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	11	15	16	8	14	11	10
		2-M	9	14	12	10	16	10	9
		3-M	8	10	12	14	11	9	8
		4-M	10	10	12	9	14	9	11
		5-F	11	14	10	24	13	9	10
		6-F	11	13	15	25	14	16	13
		7-F	11	21	16	20	17	17	14
		8-F	13	16	15	18	15	13	13
I	1	9-M	12	14	12	13	12	12	14
		10-M	12	14	15	14	14	13	15
		11-M	10	9	13	14	9	8	11
		12-M	9	15	16	12	9	10	12
		13-F	13	12	13	15	15	8	8
		14-F	17	16	19	15	17	12	16
		15-F	10	9	11	10	11	9	8
		16-F	11	9	13	10	11	9	7
II	10	17-M	8	12	12	15	10	10	10
		18-M	5	9	9	13	11	11	12
		19-M	7	9	13	14	13	12	10
		20-M	8	12	16	12	12	11	12
		21-F	12	14	12	12	12	12	9
		22-F	14	13	8	15	14	11	12
		23-F	12	11	12	11	-	-	-
		24-F	15	14	19	14	16	13	11
III	100	25-M	10	12	12	12	7	9	9
		26-M	10	10	13	17	10	10	9
		27-M	12	16	N/A	18	15	13	14
		28-M	9	15	13	9	8	8	10
		29-F	16	14	14	15	15	13	12
		30-F	15	11	13	13	12	10	9
		31-F	11	12	15	12	-	-	-
		32-F	14	17	12	10	15	10	9

N/A - data not available.
Note: Colorimetric method by Roeckelt and Gochman.

TOXSTUDIES1240

TABLE XI

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Blood Chemistry Studies: Serum Glucose, mg/100 ml

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	83	108	106	78	107	104	103
		2-M	85	101	118	103	120	106	112
		3-M	111	115	106	106	111	111	103
		4-M	84	104	100	109	90	104	98
		5-F	98	111	68	93	101	106	114
		6-F	87	104	100	85	101	98	98
		7-F	74	101	94	101	94	102	100
		8-F	97	117	106	112	97	108	109
I	1	9-M	94	115	112	106	101	100	100
		10-M	94	108	106	97	107	106	114
		11-M	91	106	102	100	111	106	105
		12-M	83	106	103	100	104	104	103
		13-F	106	102	105	109	101	100	100
		14-F	89	106	103	100	104	94	100
		15-F	106	104	106	124	104	110	107
		16-F	90	114	106	112	104	111	116
II	10	17-M	94	105	106	97	87	110	100
		18-M	100	110	103	112	104	102	93
		19-M	109	110	100	103	107	106	103
		20-M	81	99	94	97	94	98	100
		21-F	95	97	97	112	104	100	116
		22-F	104	120	75	131	101	102	98
		23-F	92	115	103	100	-	-	-
		24-F	87	105	105	105	101	96	107
III	100	25-M	87	107	97	118	83	110	109
		26-M	60	95	100	118	94	104	116
		27-M	85	106	N/A	123	104	113	109
		28-M	81	106	94	109	114	100	100
		29-F	96	108	100	116	97	102	103
		30-F	94	120	109	109	97	102	107
		31-F	82	94	88	100	-	-	-
		32-F	113	94	97	105	87	100	98

N/A - data not available.

Note: Colorimetric method by Roeckelt and Gochman.

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TOXSTUDIES1241

TABLE XII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Blood Chemistry Studies: Serum Alkaline Phosphatase, King-Armstrong Units/100 ml

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	12.3	14.5	6.6	5.2	6.2	4.9	7.4
		2-M	17.9	16.1	9.2	10.3	7.7	5.6	7.4
		3-M	10.1	10.7	5.8	3.5	4.4	3.8	4.9
		4-M	9.9	11.6	5.4	4.2	4.4	2.5	3.1
		5-F	7.0	10.7	8.0	3.0	2.3	2.0	2.9
		6-F	10.5	11.0	5.4	4.9	5.2	5.6	6.2
		7-F	13.7	10.2	4.6	3.3	4.4	4.4	4.4
		8-F	9.9	12.4	6.2	3.3	4.4	4.4	5.5
I	1	9-M	7.7	7.8	3.4	3.2	2.9	3.8	3.1
		10-M	8.4	8.2	3.9	3.2	3.2	3.1	3.6
		11-M	6.3	7.4	3.2	3.2	2.5	3.3	3.1
		12-M	10.3	12.6	8.0	6.1	6.0	6.4	7.4
		13-F	12.5	16.6	12.9	4.2	9.1	8.8	10.4
		14-F	8.2	12.9	4.3	3.3	4.0	4.1	7.6
		15-F	7.0	11.8	3.9	5.2	3.6	3.8	5.8
		16-F	6.7	9.0	3.7	4.6	2.7	3.8	4.0
II	10	17-M	8.6	8.4	3.4	5.7	2.9	2.3	3.1
		18-M	10.3	7.8	5.4	5.4	6.6	8.1	8.4
		19-M	9.9	15.0	6.8	6.2	7.9	6.2	7.4
		20-M	11.6	12.8	6.4	5.4	5.4	5.5	8.6
		21-F	8.2	12.8	4.5	3.0	3.8	3.8	3.3
		22-F	12.1	8.8	12.7	3.9	5.0	4.4	11.7
		23-F	8.8	11.6	11.7	3.9	-	-	-
		24-F	10.3	12.5	6.4	4.6	4.8	6.4	9.9
III	100	25-M	9.0	12.5	6.6	5.1	9.8	7.5	10.1
		26-M	10.5	11.6	8.2	6.2	8.8	9.9	13.4
		27-M	11.6	14.5	N/A	6.8	9.4	13.4	12.8
		28-M	12.1	10.3	7.0	6.1	7.2	13.2	9.4
		29-F	7.0	10.3	3.9	4.2	4.2	5.1	6.5
		30-F	6.7	7.8	3.6	8.9	3.6	4.4	4.9
		31-F	10.9	8.0	13.4	6.8	-	-	-
		32-F	9.0	7.4	6.6	4.6	6.4	6.6	10.4

N/A - data not available.
Note: Colorimetric method by Babson.

0365928

TOXSTUDIES1242

TABLE XIII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Blood Chemistry Studies: Serum Glutamic-Oxalacetic Transaminase, Dade Units/ml

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	42	31	33	23	27	27	23
		2-M	40	35	36	28	24	22	18
		3-M	31	28	27	25	23	29	18
		4-M	30	24	25	25	21	26	21
		5-F	36	29	28	21	20	25	20
		6-F	42	31	41	36	24	26	21
		7-F	33	30	39	38	26	38	23
		8-F	34	29	38	25	26	37	22
I	1	9-M	44	32	32	22	21	27	19
		10-M	35	32	31	31	25	26	22
		11-M	38	28	29	25	23	29	20
		12-M	38	30	32	26	23	26	17
		13-F	38	35	32	30	29	35	20
		14-F	42	30	38	30	30	39	17
		15-F	36	31	31	26	24	31	15
		16-F	38	29	38	21	28	34	20
II	10	17-M	42	23	26	25	24	28	16
		18-M	40	31	30	34	30	37	20
		19-M	37	29	33	31	24	24	17
		20-M	42	30	30	31	24	30	16
		21-F	40	24	28	32	24	37	20
		22-F	41	26	33	37	25	24	18
		23-F	43	25	27	31	-	-	-
		24-F	43	31	37	32	28	34	20
III	100	25-M	32	19	20	22	32	20	14
		26-M	40	23	28	23	22	26	16
		27-M	23	22	N/A	37	36	37	21
		28-M	40	34	44	37	36	36	20
		29-F	35	26	33	36	23	30	30
		30-F	33	27	32	33	26	37	31
		31-F	36	32	33	32	-	-	-
		32-F	40	28	35	25	22	30	22

N/A - data not available.

Note: Fluorometric method by Levine and Hill.

0365929

TOXSTUDIES1243

TABLE XIV

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Blood Chemistry Studies: Serum Glutamic-Pyruvic Transaminase, Dade Units/ml

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	55	43	62	43	73	76	60
		2-M	47	51	50	39	51	41	42
		3-M	36	39	39	49	52	34	39
		4-M	22	22	24	28	34	18	29
		5-F	31	31	20	31	31	21	30
		6-F	38	36	39	63	41	28	36
		7-F	35	36	40	57	41	35	39
		8-F	24	28	31	43	36	23	29
I	1	9-M	36	38	46	28	40	27	38
		10-M	30	38	35	38	41	31	40
		11-M	38	40	41	34	44	35	37
		12-M	35	43	43	32	46	49	46
		13-F	39	43	35	66	46	35	31
		14-F	31	32	32	33	29	21	22
		15-F	31	37	37	47	35	30	28
		16-F	27	32	34	49	37	34	38
II	10	17-M	32	31	39	26	36	34	33
		18-M	24	19	24	36	37	27	23
		19-M	31	32	27	34	40	31	34
		20-M	30	30	37	14	37	34	35
		21-F	17	37	30	47	27	32	30
		22-F	52	37	25	82	40	35	35
		23-F	27	26	20	37	-	-	-
		24-F	35	41	39	52	38	35	41
III	100	25-M	26	20	20	19	22	24	24
		26-M	26	22	25	16	32	35	35
		27-M	20	31	N/A	38	52	54	46
		28-M	33	19	27	25	32	34	24
		29-F	30	28	36	42	37	36	56
		30-F	29	20	34	44	36	39	54
		31-F	31	35	31	40	-	-	-
		32-F	41	30	22	37	24	23	28

N/A - data not available.

Note: Fluorometric method by Levine and Hill.

0365930

TOXSTUDIES1244

G. Urine Analyses

The results of these determinations are presented in Tables XV through XIX. Dashes in the tables indicate animals that died during the study. No significant abnormalities were noted at any of the levels tested.

TOXSTUDIES1245

TABLE XV

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Urine Analyses: Albumin, mg/100 ml

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	0	0	1-10	0	0	0	0
		2-M	0	0	1-10	1-10	0	0	0
		3-M	0	0	1-10	0	0	0	0
		4-M	0	0	1-10	0	0	0	0
		5-F	0	0	0	0	0	0	0
		6-F	0	0	1-10	0	0	0	0
		7-F	0	0	0	0	0	0	0
		8-F	0	0	0	0	0	10	0
I	1	9-M	0	0	1-10	0	0	0	0
		10-M	0	0	1-10	1-10	0	0	0
		11-M	0	0	0	0	0	10	0
		12-M	0	0	0	0	0	0	0
		13-F	0	0	0	0	0	0	0
		14-F	0	0	0	0	0	0	0
		15-F	0	0	0	0	0	10	0
		16-F	0	0	0	0	0	0	0
II	10	17-M	0	0	0	11-50	0	0	0
		18-M	0	0	0	0	1-10	0	0
		19-M	0	0	0	0	0	0	0
		20-M	0	0	0	0	0	0	0
		21-F	0	0	0	0	0	0	0
		22-F	0	0	0	0	0	0	0
		23-F	0	0	0	0	-	-	-
		24-F	0	0	0	0	0	0	0
III	100	25-M	0	0	1-10	0	0	0	0
		26-M	0	0	1-10	1-10	0	0	0
		27-M	0	0	0	0	0	10	0
		28-M	0	0	0	0	0	10	0
		29-F	0	0	0	0	0	0	0
		30-F	0	0	0	0	0	0	0
		31-F	0	0	1-10	0	-	-	-
		32-F	0	0	0	0	0	10	0

Note: BUMINTEST, Ames Company, Inc., Elkhart, Indiana.

0365932

TOXSTUDIES1246

TABLE XVI

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Urine Analyses: Glucose, mg/100 ml

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	0	0	0	0	0	0	0
		2-M	0	0	0	0	0	0	0
		3-M	0	0	0	0	0	0	0
		4-M	0	0	0	0	0	0	0
		5-F	0	0	0	0	0	0	0
		6-F	0	0	0	0	0	0	0
		7-F	0	0	0	0	0	0	0
		8-F	0	0	0	0	0	0	0
I	1	9-M	0	0	0	0	0	0	0
		10-M	0	0	0	0	0	0	0
		11-M	0	0	0	0	0	0	0
		12-M	0	0	0	0	0	0	0
		13-F	0	0	0	0	0	0	0
		14-F	0	0	0	0	0	0	0
		15-F	0	0	0	0	0	0	0
		16-F	0	0	0	0	0	0	0
II	10	17-M	0	0	0	0	0	0	0
		18-M	0	0	0	0	0	0	0
		19-M	0	0	0	0	0	0	0
		20-M	0	0	0	0	0	0	0
		21-F	0	0	0	0	0	0	0
		22-F	0	0	0	0	0	0	0
		23-F	0	0	0	0	-	-	-
		24-F	0	0	0	0	0	0	0
III	100	25-M	0	0	0	0	0	0	0
		26-M	0	0	0	0	0	0	0
		27-M	0	0	0	0	0	0	0
		28-M	0	0	0	0	0	0	0
		29-F	0	0	0	0	0	0	0
		30-F	0	0	0	0	0	0	0
		31-F	0	0	0	0	-	-	-
		32-F	0	0	0	0	0	0	0

Note: COMBISTIX, Ames Company, Inc., Elkhart, Indiana.

TOXSTUDIES1247

TABLE XVII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Urine Analyses: pH

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	9	8	7	8	8	8	8
		2-M	5	6	8	9	9	9	9
		3-M	9	6	8	8	8	8	9
		4-M	8	6	7	9	7	8	8
		5-F	5	6	7	7	8	9	8
		6-F	5	6	9	5	8	6	6
		7-F	8	6	5	5	8	9	6
		8-F	8	8	7	5	7	9	6
I	1	9-M	9	8	8	8	7	8	6
		10-M	6	8	9	9	9	8	9
		11-M	6	7	9	9	8	8	8
		12-M	6	8	7	6	9	7	8
		13-F	5	9	5	6	6	7	6
		14-F	6	6	8	6	6	8	6
		15-F	5	8	7	7	9	7	8
		16-F	8	8	7	9	9	7	9
II	10	17-M	6	9	7	9	7	6	8
		18-M	5	9	5	9	9	8	7
		19-M	7	9	7	7	6	8	7
		20-M	9	8	5	9	8	9	9
		21-F	7	5	7	5	8	6	9
		22-F	9	7	N/A	8	6	7	6
		23-F	7	9	9	5	-	-	-
		24-F	5	6	7	5	7	6	8
III	100	25-M	7	7	7	9	6	8	8
		26-M	9	8	8	9	7	8	8
		27-M	5	7	N/A	6	7	8	5
		28-M	6	7	8	7	8	8	5
		29-F	5	7	7	6	7	7	7
		30-F	5	6	6	6	8	8	7
		31-F	5	6	9	5	-	-	-
		32-F	6	7	8	5	6	9	7

N/A - data not available.

Note: COMBISTIX, Ames Company, Inc., Elkhart, Indiana.

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TOXSTUDIES1248

TABLE XVIII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Urine Analyses: Specific Gravity

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	1.054	1.032	1.032	1.032	1.022	1.022	1.015
		2-M	1.032	1.019	1.024	1.043	1.041	1.045	1.029
		3-M	1.032	1.024	1.024	1.057	1.017	1.034	1.022
		4-M	1.034	1.019	1.032	1.038	1.030	1.036	1.032
		5-F	1.026	1.010	1.015	1.022	1.015	1.026	1.012
		6-F	1.026	1.012	1.026	1.032	1.022	1.026	1.019
		7-F	1.024	1.019	1.038	1.041	1.027	1.038	1.019
		8-F	1.032	1.029	1.026	1.032	1.032	1.043	1.022
I	1	9-M	1.045	1.038	1.032	1.050	1.045	1.048	1.038
		10-M	1.045	1.032	1.024	1.045	1.026	1.038	1.022
		11-M	1.045	1.019	1.022	1.043	1.017	1.029	1.019
		12-M	1.045	1.012	1.019	1.054	1.015	1.035	1.032
		13-F	1.041	1.012	1.024	1.048	1.006	1.041	1.015
		14-F	1.032	1.029	1.026	1.026	1.008	1.048	1.015
		15-F	1.036	1.012	1.029	1.028	1.020	1.050	1.017
		16-F	1.045	1.007	1.032	1.030	1.040	1.042	1.015
II	10	17-M	1.024	1.019	1.026	1.045	1.033	1.015	1.029
		18-M	1.029	1.012	1.026	1.043	1.021	1.010	1.017
		19-M	1.032	1.015	1.034	1.048	1.040	1.010	1.032
		20-M	1.032	1.032	1.050	1.041	1.029	1.041	1.026
		21-F	1.026	1.052	1.034	1.034	1.040	1.034	1.010
		22-F	1.015	1.032	N/A	1.033	1.030	1.041	1.010
		23-F	1.032	1.022	1.041	1.038	-	-	-
		24-F	1.041	1.022	1.048	1.041	1.033	1.045	1.015
III	100	25-M	1.026	1.032	1.041	1.050	1.043	1.041	1.026
		26-M	1.015	1.026	1.043	1.061	1.050	1.010	1.041
		27-M	1.032	1.029	N/A	1.054	1.012	1.050	1.045
		28-M	1.015	1.007	1.010	1.041	1.003	1.043	1.026
		29-F	1.045	1.012	1.045	1.017	1.026	1.034	1.024
		30-F	1.038	1.022	1.045	1.029	1.029	1.036	1.026
		31-F	1.045	1.036	1.050	1.038	-	-	-
		32-F	1.041	1.024	1.041	1.041	1.006	1.038	1.026

N/A - data not available.

TOXSTUDIES1249

TABLE XIX

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Urine Analyses: Microscopic Elements,
average per high power field - Leukocytes

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	0	0	0	0	0	0	0
		2-M	0	0	0	0	0	0	0
		3-M	0	0	0	0	0	0	0
		4-M	0	0	0	0	0	0	0
		5-F	0	0	0	0	0	0	0
		6-F	0	0	0	0	0	0	0
		7-F	0	0	0	0	0	0	0
		8-F	0	0	0	0	0	0	0
I	1	9-M	0	0	0	0	0	0	0
		10-M	0	0	0	0	0	0	0
		11-M	0	0	0	0	0	0	0
		12-M	0	0	20	0	0	0	0
		13-F	0	0	0	0	0	0	0
		14-F	0	0	10	0	0	0	0
		15-F	0	0	0	0	0	0	0
		16-F	0	0	0	0	0	0	0
II	10	17-M	0	0	0	0	0	0	0
		18-M	0	0	0	0	0	0	0
		19-M	0	0	0	0	0	0	0
		20-M	0	0	0	0	0	0	0
		21-F	0	0	0	0	0	0	0
		22-F	0	8	N/A	0	0	0	0
		23-F	0	10	0	8	-	-	-
		24-F	0	0	0	0	0	0	0
III	100	25-M	0	0	0	0	0	0	0
		26-M	0	0	0	0	0	0	0
		27-M	0	0	N/A	0	0	0	0
		28-M	0	0	0	0	0	0	0
		29-F	0	0	0	0	25	0	0
		30-F	0	0	0	0	0	0	0
		31-F	0	0	0	0	-	-	-
		32-F	0	0	0	15	0	0	0

N/A - data not available.

TOXSTUDIES1250

TABLE XIX continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Urine Analyses: Microscopic Elements,
average per high power field - Erythrocytes

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	0	0	0	0	0	0	0
		2-M	0	0	0	0	0	0	0
		3-M	0	0	0	0	0	0	0
		4-M	0	0	0	0	0	0	0
		5-F	0	0	0	0	0	0	0
		6-F	0	0	0	0	0	0	0
		7-F	0	0	0	0	0	0	0
		8-F	0	0	0	0	0	0	0
I	1	9-M	0	0	0	0	0	0	0
		10-M	0	0	0	0	0	0	0
		11-M	0	0	0	0	0	0	0
		12-M	0	0	0	0	0	0	0
		13-F	0	0	25	0	0	0	0
		14-F	0	0	0	0	0	0	0
		15-F	0	0	25	0	0	0	0
		16-F	0	0	0	0	0	0	0
II	10	17-M	0	0	0	0	0	0	0
		18-M	0	0	0	0	0	0	0
		19-M	0	0	0	0	0	0	0
		20-M	0	0	0	0	0	0	0
		21-F	0	0	0	0	0	0	0
		22-F	0	0	N/A	0	0	0	0
		23-F	0	0	0	0	-	-	-
		24-F	0	0	0	0	0	0	0
III	100	25-M	0	0	0	0	0	0	0
		26-M	0	0	0	0	0	0	0
		27-M	0	0	N/A	0	0	0	0
		28-M	0	0	0	0	0	0	0
		29-F	0	0	0	0	0	0	0
		30-F	0	0	0	0	0	0	0
		31-F	0	0	50	0	-	-	-
		32-F	0	0	0	0	0	0	0

N/A - data not available.

TOXSTUDIES1251

TABLE XIX continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Urine Analyses: Microscopic Elements,
average per high power field - Crystals

Group	Dietary Level (ppm)	Dog Number and Sex	Months: 0	1	3	6	12	18	24
UC	None	1-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		2-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		3-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		4-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		5-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		6-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		7-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		8-F	4	1-3	1-3	1-3	1-3	1-3	1-3
I	1	9-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		10-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		11-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		12-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		13-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		14-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		15-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		16-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
II	10	17-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		18-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		19-M	5-8	1-3	1-3	1-3	1-3	1-3	1-3
		20-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		21-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		22-F	1-3	1-3	N/A	1-3	1-3	1-3	1-3
		23-F	1-3	1-3	1-3	1-3	-	-	-
		24-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
III	100	25-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		26-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		27-M	1-3	1-3	N/A	1-3	1-3	1-3	1-3
		28-M	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		29-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		30-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3
		31-F	1-3	1-3	1-3	1-3	-	-	-
		32-F	1-3	1-3	1-3	1-3	1-3	1-3	1-3

N/A - data not available.

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TOXSTUDIES1252

H. Pathologic Findings

1. Organ Weight Data

Organ weight data are presented in Tables XX through XXVIII.

Four animals show liver to body weight ratios higher than untreated controls. In animals 23-F and 31-F, these values are the result of poor overall body weight gains rather than actual organ weight elevations. Dog 26-M shows a ratio at the upper limit of the range considered normal for the beagle. The value for dog 27-M represents a elevation in liver to body weight ratio.

A male (no. 17) receiving 10 ppm Aroclor 1254 and three males (nos. 25, 26, 28) receiving 100 ppm showed depressed absolute testes weights and testes to body weight ratios. The lack of proper size is considered an atrophic condition resulting from a chronic testicular inflammation found in these four animals. This is discussed further under 2. Gross and Histologic Findings.

All other organ to body weight ratios fall within normal limits.

TOXSTUDIES1253

TABLE XX

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Liver

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	269.3	35.4
		2-M	397.2	39.7
		3-M[1]	346.3	34.3
		4-M[2]	481.8	32.6
		5-F	316.8	34.4
		6-F[1]	443.6	41.8
		7-F	326.1	34.3
		8-F[2]	355.3	28.6
I	1	9-M	468.2	35.5
		10-M	488.1	39.4
		11-M[1]	461.5	34.7
		12-M[2]	531.8	34.1
		13-F[2]	470.2	34.8
		14-F[1]	478.2	41.2
		15-F	428.2	32.7
		16-F	365.0	29.0
II	10	17-M[1]	409.8	33.0
		18-M[2]	483.5	34.8
		19-M	462.2	39.5
		20-M	444.6	40.8
		21-F[1]	285.8	32.1
		22-F	286.8	36.8
		23-F[4]	277.5	47.8
		24-F	317.5	37.8
III	100	25-M[1]	318.7	36.6
		26-M	359.2	44.9
		27-M	447.4	54.6
		28-M[2]	293.0	31.8
		29-F	310.3	40.8
		30-F	415.4	41.5
		31-F[3]	439.2	73.2
		32-F[2]	449.6	35.7

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

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TOXSTUDIES1254

TABLE XXI

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Kidneys

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	55.4	7.29
		2-M	79.2	7.92
		3-M[1]	70.8	7.01
		4-M[2]	71.4	4.82
		5-F	49.9	5.42
		6-F[1]	58.4	5.51
		7-F	45.3	4.47
		8-F[2]	53.0	4.27
I	1	9-M	79.5	6.02
		10-M	73.0	5.89
		11-M[1]	88.5	6.65
		12-M[2]	90.5	5.80
		13-F[2]	95.0	7.04
		14-F[1]	52.8	4.55
		15-F	74.5	5.69
		16-F	63.8	5.06
II	10	17-M[1]	64.1	5.17
		18-M[2]	60.8	4.37
		19-M	81.0	6.92
		20-M	58.7	5.38
		21-F[1]	51.2	5.75
		22-F	42.9	5.50
		23-F[4]	49.3	8.50
		24-F	44.0	5.24
III	100	25-M[1]	62.5	7.18
		26-M	63.5	7.94
		27-M	45.8	5.85
		28-M[2]	73.5	7.99
		29-F	41.3	5.43
		30-F	53.3	5.33
		31-F[3]	55.8	9.30
		32-F[2]	57.8	4.59

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

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TOXSTUDIES1255

TABLE XXII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Heart

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	73.6	9.68
		2-M	107.0	10.7
		3-M[1]	80.9	8.01
		4-M[2]	128.6	8.69
		5-F	70.2	7.63
		6-F[1]	93.8	8.85
		7-F	89.0	9.37
		8-F[2]	113.5	9.15
I	1	9-M	105.4	7.98
		10-M	122.3	9.86
		11-M[1]	106.4	8.00
		12-M[2]	120.7	7.74
		13-F[2]	95.0	7.04
		14-F[1]	94.4	8.14
		15-F	102.5	7.82
		16-F	95.6	7.59
II	10	17-M[1]	103.9	8.38
		18-M[2]	121.7	8.76
		19-M	91.3	7.80
		20-M	126.1	11.56
		21-F[1]	78.4	8.81
		22-F	71.7	9.19
		23-F[4]	58.5	10.1
		24-F	74.4	8.86
III	100	25-M[1]	68.4	7.86
		26-M	79.5	9.94
		27-M	45.8	8.91
		28-M[2]	84.9	9.23
		29-F	41.3	8.25
		30-F	87.5	8.75
		31-F[3]	55.5	9.25
		32-F[2]	104.4	8.28

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

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TOXSTUDIES1256

TABLE XXIII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Brain

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	72.8	9.58
		2-M	76.1	7.61
		3-M[1]	82.0	8.12
		4-M[2]	82.9	5.60
		5-F	72.3	7.86
		6-F[1]	77.4	7.30
		7-F	79.4	8.36
		8-F[2]	80.4	6.48
I	1	9-M	85.0	6.44
		10-M	86.2	6.95
		11-M[1]	67.2	5.05
		12-M[2]	73.6	4.72
		13-F[2]	75.0	5.56
		14-F[1]	79.1	6.82
		15-F	76.2	5.82
		16-F	73.2	5.81
II	10	17-M[1]	75.9	6.12
		18-M[2]	78.9	5.68
		19-M	87.3	7.46
		20-M	79.8	7.32
		21-F[1]	72.5	8.14
		22-F	79.1	10.14
		23-F[4]	81.4	14.03
		24-F	72.7	8.65
III	100	25-M[1]	79.3	9.11
		26-M	75.9	9.49
		27-M	79.5	9.70
		28-M[2]	79.3	8.62
		29-F	65.0	8.55
		30-F	74.2	7.42
		31-F[3]	70.5	11.75
		32-F[2]	77.6	6.16

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

TOXSTUDIES1257

TABLE XXIV

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Spleen

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	21.3	2.80
		2-M	27.2	2.72
		3-M[1]	16.3	1.61
		4-M[2]	29.1	1.97
		5-F	19.2	2.87
		6-F[1]	22.9	2.16
		7-F	20.2	2.13
		8-F[2]	30.1	2.43
I	1	9-M	34.7	2.63
		10-M	23.3	1.88
		11-M[1]	24.9	1.87
		12-M[2]	37.2	2.38
		13-F[1]	15.2	1.13
		14-F	22.8	1.96
		15-F	27.0	2.06
		16-F	29.3	2.32
II	10	17-M[1]	29.7	2.39
		18-M[2]	36.1	2.60
		19-M	26.0	2.22
		20-M	24.8	2.28
		21-F[1]	23.5	2.64
		22-F	14.9	1.91
		23-F[4]	13.3	2.29
		24-F	24.3	2.89
III	100	25-M[1]	19.9	2.29
		26-M	21.8	2.72
		27-M	17.2	2.10
		28-M[2]	29.1	3.16
		29-F	16.0	2.10
		30-F	26.0	2.60
		31-F[3]	25.8	4.30
		32-F[2]	40.8	3.24

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

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TABLE XXV

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Gonads

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	16.0	2.10
		2-M	15.2	1.52
		3-M[1]	14.3	1.41
		4-M[2]	20.5	1.38
		5-F	0.769	0.0836
		6-F[1]*	2.498	0.236
		7-F	1.372	0.144
		8-F[2]	0.993	0.0801
I	1	9-M	17.4	1.32
		10-M	15.5	1.25
		11-M[1]	26.2	1.97
		12-M[2]	30.5	1.96
		13-F[2]	1.413	0.105
		14-F[1]	1.225	0.106
		15-F	1.681	0.128
		16-F	0.912	0.0724
II	10	17-M[1]	8.6	0.694
		18-M[2]	20.8	1.50
		19-M	24.8	2.12
		20-M	19.5	1.79
		21-F[1]	0.711	0.0799
		22-F	0.777	0.0966
		23-F[4]	0.497	0.0857
		24-F	0.908	0.108
III	100	25-M[1]	7.8	0.896
		26-M	3.8	0.475
		27-M	19.4	2.36
		28-M[2]	6.9	0.746
		29-F	0.806	0.106
		30-F	1.294	0.129
		31-F[3]	0.635	0.106
		32-F[2]	1.692	0.134

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

* Animal in estrus.

0365945

TOXSTUDIES1259

TABLE XXVI

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Adrenal Glands

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	1.170	0.154
		2-M	1.480	0.148
		3-M[1]	1.350	0.134
		4-M[2]	1.132	0.0765
		5-F	1.569	0.170
		6-F[1]	1.834	0.173
		7-F	1.308	0.138
		8-F[2]	1.297	0.105
I	1	9-M	1.850	0.140
		10-M	1.855	0.150
		11-M[1]	1.563	0.118
		12-M[2]	1.905	0.122
		13-F[2]	2.525	0.187
		14-F[1]	1.645	0.142
		15-F	2.006	0.153
		16-F	1.737	0.138
II	10	17-M[1]	1.442	0.116
		18-M[2]	1.879	0.135
		19-M	1.427	0.122
		20-M	1.677	0.153
		21-F[1]	1.249	0.140
		22-F	1.156	0.148
		23-F[4]	1.688	0.291
		24-F	1.642	0.195
III	100	25-M[1]	1.178	0.135
		26-M	1.217	0.152
		27-M	1.364	0.166
		28-M[2]	1.321	0.144
		29-F	1.680	0.221
		30-F	1.566	0.157
		31-F[3]	0.912	0.152
		32-F[2]	1.618	0.128

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

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TOXSTUDIES1260

TABLE XXVII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Thyroid Gland

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	0.435	0.0572
		2-M	1.013	0.101
		3-M[1]	1.066	0.106
		4-M[2]	1.101	0.0744
		5-F	0.615	0.0668
		6-F[1]	1.692	0.160
		7-F	0.631	0.0664
		8-F[2]	0.952	0.0768
I	1	9-M	1.284	0.0972
		10-M	1.223	0.0986
		11-M[1]	1.096	0.0824
		12-M[2]	2.041	0.131
		13-F[2]	1.167	0.0864
		14-F[1]	1.179	0.102
		15-F	2.173	0.166
		16-F	1.318	0.105
II	10	17-M[1]	1.334	0.108
		18-M[2]	1.290	0.0928
		19-M	1.648	0.141
		20-M	1.130	0.104
		21-F[1]	0.606	0.0681
		22-F	0.836	0.107
		23-F[4]	0.704	0.121
		24-F	1.186	0.141
III	100	25-M[1]	0.855	0.0983
		26-M	1.169	0.146
		27-M	0.995	0.121
		28-M[2]	0.810	0.0880
		29-F	1.026	0.135
		30-F	1.764	0.176
		31-F[3]	0.826	0.138
		32-F[2]	0.916	0.0727

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

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TOXSTUDIES1261

TABLE XXVIII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity - Beagle Dogs

Organ Weight Data: Pituitary Gland

Group	Dietary Level (ppm)	Dog Number and Sex	Organ Weight (g)	Organ/Body Weight Ratio (g/1,000g)
UC	None	1-M	0.086	0.0113
		2-M	0.116	0.0116
		3-M[1]	0.080	0.00792
		4-M[2]	0.099	0.00669
		5-F	0.101	0.0110
		6-F[1]	0.184	0.0174
		7-F	0.101	0.0106
		8-F[2]	0.097	0.00782
I	1	9-M	0.109	0.00826
		10-M	0.155	0.0125
		11-M[1]	0.110	0.00827
		12-M[2]	0.095	0.00609
		13-F[2]	0.110	0.00815
		14-F[1]	0.120	0.0103
		15-F	0.191	0.0146
		16-F	0.083	0.00659
II	10	17-M[1]	0.073	0.00589
		18-M[2]	0.102	0.00700
		19-M	0.092	0.00786
		20-M	0.164	0.0150
		21-F[1]	0.080	0.00899
		22-F	0.157	0.0201
		23-F[4]	0.065	0.0112
		24-F	0.173	0.0206
III	100	25-M[1]	0.087	0.0100
		26-M	0.185	0.0231
		27-M	0.065	0.00793
		28-M[2]	0.073	0.00793
		29-F	0.070	0.00921
		30-F	0.093	0.00930
		31-F[3]	0.105	0.0175
		32-F[2]	0.113	0.00897

[1]Sacrificed after 30-day recovery period.
[2]Sacrificed after 60-day recovery period.
[3]Died after 33 weeks of testing.
[4]Died after 37 weeks of testing.

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TOXSTUDIES1262

2. Gross and Histologic Findings

Gross and histologic findings are presented in Tables XXIX through XXXII. All tissues and organs not mentioned were normal. The grading system used is as follows:

\+ = minimal/trace
++ = mild
+++ = moderate
++++ = severe

TOXSTUDIES1263

IBT No. C7299 March 11, 1970

I have examined the tissues from one dog (23-F) from IBT No. C7299. There was chronic peritonitis evident on the serous surfaces of the stomach, intestine and bladder. This lesion was chronic and had been present for at least a week and probably longer. There was severe autolysis of the tissues.

Ward R. Richter

Ward R. Richter, D.V.M., M.S.
Diplomate, American College of
Veterinary Pathologists

0365950

TOXSTUDIES1264

IBT No. C7299 October 27, 1971

None of the changes observed in sections from any of the dogs in this study reveal a definite drug-related pattern. The mild to moderate non-specific chronic inflammatory changes in lung, liver, prostate gland, kidney, salivary gland, stomach, small intestine and lymph node are considered incidental findings, observed frequently in clinically normal, untreated dogs. The lymphoid infiltration (inflammation) seen in the thyroid of one dog (1 ppm Aroclor 1254) is noted in certain blood lines (canine) and is a naturally-occurring phenomenon.

The changes in testes are difficult to assess. The etiology of the changes cannot be precisely determined, but it is thought than an unspecified infectious condition produced the inflammatory lesions observed.

Donald H. Yost, D.V.M.
Diplomate, American College of
Veterinary Pathologists

TOXSTUDIES1265

TABLE XXIX

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Untreated Control Group

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
1-M	-	-	-	-	-
2-M	-	-	-	-	-
3-M[1]	Prostate gland	-	-	Focal non-specific chronic inflammation	+++
	Lungs	-	-	Focal hemorrhage (agonal)	++
	Lymph node (cervical)	-	-	Congestion	+
4-M[2]	-	-	-	-	-
5-F	-	-	-	-	-
6-F[1]	-	-	-	-	-
7-F	-	-	-	-	-
8-F[2]	-	-	-	-	-

[1]Sacrificed after a 30-day recovery period.
[2]Sacrificed after a 60-day recovery period.

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TOXSTUDIES1266

TABLE XXX

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group I: 1 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
9-M	Stomach	Numerous pinpoint nodules (pyloric region)	+	-	-
10-M	Stomach	Numerous pinpoint nodules (pyloric and cardiac regions)	+++	-	-
11-M[1]	-	-	-	-	-
12-M[2]	-	-	-	-	-
13-F[2]	-	-	-	-	-
14-F[1]	Stomach	Numerous pinpoint nodules (pyloric region)	+	-	-
	Thyroid gland	-	-	Chronic interstitial inflammation	++++
15-F	Uterus	In estrous	-	-	-
16-F	Uterus	In estrous	-	-	-

[1] Sacrificed after a 30-day recovery period.
[2] Sacrificed after a 60-day recovery period.

TOXSTUDIES1267

TABLE XXXI

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group II: 10 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
17-M[1]	Testes	Undersize, appear underdeveloped	+++	Chronic focal inflammation	+
				Diffuse testicular degeneration	++
				Diffuse hyperplasia of the interstitial cells	+
				Aspermatogenesis	-
18-M[2]	-	-	-	-	-
19-M	Lungs	-	-	Focal non-specific chronic inflammation	++
20-M	Lungs	-	-	Focal non-specific chronic inflammation	++
21-F[1]	Lungs	-	-	Focal non-specific chronic inflammation	+
				Focal hemorrhage	-
22-F	-	-	-	-	-

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TOXSTUDIES1268

TABLE XXXI continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group II: 10 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
23-F[4]	(examination 8-12 hours postmortem)			Autolysis of all tissues	++++
	Gall bladder	Distended twice normal size with bile	+++	-	-
	Liver	-	-	Congestion	+
	Peritoneum	Thickened, opaque and constricted about gastrointestinal tract and urinary bladder; no lesions or blockages of gastrointestinal tract, in spite of intestinal serosae adhering to one another and causing pressure and torsion; abdominal cavity contained approximately 100 ml translucent fluid.	+++	Chronic peritonitis on serosal surfaces of intestine, stomach and urinary bladder; no acute lesions present.	+++

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TOXSTUDIES1269

TABLE XXXI continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group II: 10 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
23-F[4]	Lymph node (mesenteric)	Tissues appear to have dissolved, no cellular tissue suitable for fixation.	-	-	-
24-F	Lungs	-	-	Focal non-specific chronic inflammation	++
	Stomach	Numerous pinpoint nodules (pyloric region)	++	-	-

[1]Sacrificed after a 30-day recovery period.
[2]Sacrificed after a 60-day recovery period.
[4]Died after 37 weeks on test.

TOXSTUDIES1270

TABLE XXXII

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group III: 100 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
25-M[1]	Colon	Petechiae	+++	-	-
	Ileum	Ileocolic valve tissues swollen and reddened, causing partial blockage of gastrointestinal tract.	+++	-	-
	Abdomen	Approximately 20 ml translucent fluid in abdominal cavity	-	-	-
	Stomach	Numerous pinpoint nodules (pyloric and cardiac regions)	++++	-	-
	Testes	Undersize, appear underdeveloped	+++	Chronic diffuse inflammation Focal testicular degeneration Aspermatogenesis.	++++ +++ -

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TOXSTUDIES1271

TABLE XXXII continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group III: 100 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
25-M[1]	Prostate gland	-	-	Focal non-specific chronic inflammation	++
	Salivary gland	-	-	Focal non-specific chronic inflammation	+
26-M	Liver	-	-	Focal non-specific chronic inflammation	++
	Lungs	-	-	Focal non-specific chronic inflammation	++
	Testes	Undersize, appear underdeveloped	+++	Chronic focal inflammation	+
				Diffuse testicular degeneration	++
				Diffuse hyperplasia of the interstitial cells	+
				Aspermatogenesis	-

TOXSTUDIES1272

TABLE XXXII continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group III: 100 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
27-M	Lungs	-	-	Focal non-specific chronic inflammation	++
	Stomach	Numerous pinpoint nodules (pyloric and cardiac regions)	+++	-	-
28-M[2]	Kidneys	Numerous scars and identations on external cortical surfaces	+++	-	-
	Stomach	Numerous pinpoint nodules (pyloric and cardiac regions)	+++	-	-
	Testes	Undersize, appear underdeveloped	+++	Chronic diffuse inflammation	++
				Diffuse testicular degeneration	+++
				Diffuse hyperplasia of the interstitial cells	+
				Diffuse aspermatogenesis	-

0365959

TOXSTUDIES1273

TABLE XXXII continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group III: 100 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
29-F	Lungs	-	-	Focal non-specific chronic inflammation	++
	Stomach	Numerous pinpoint nodules (pyloric and cardiac regions)	+++	-	-
30-F	Kidneys	-	-	Focal non-specific chronic inflammation (medulla)	++
	Stomach	Numerous pinpoint nodules (pyloric region)	++	-	-

TOXSTUDIES1274

TABLE XXXII continued

TEST MATERIAL: Aroclor 1254

Two-Year Chronic Oral Toxicity Study - Beagle Dogs

Gross and Histologic Findings

Test Group III: 100 ppm

Dog Number and Sex	Organ	Gross	Grade	Histologic	Grade
31-F[3]	(animal died owing to traumatic injuries sustained in fight; examination performed immediately postmortem)				
	Liver	-	-	Hyperemia	+
	Lymph node (mesenteric)	-	-	Focal granulomatous inflammation	+
				Hyperemia	++
	Pituitary gland	-	-	Hyperemia	+
	Small intestine (duodenum)	-	-	Focal inflammation	+
	Stomach	-	-	Focal inflammation	+
32-F[2]	Lungs	-	-	Focal interstitial pneumonia	+

[1]Sacrificed after a 30-day recovery period.
[2]Sacrificed after a 60-day recovery period.
[3]Died after 33 weeks on test.

TOXSTUDIES1275