YOUNGER LABORATORIES
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Certificate of Analysis

C+25AM

June 25th, 1962

SUBJECT -

Toxicological Investigation Of: Aroclor 1262

Monsanto Sample Number 40
Monsanto Project Number Y-62-38

STUDY CONDUCTED FOR -

Monsanto Chemical Company, St. Louis, Missouri

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EXPERIMENTAL PROCEDURE -

A) Oral LD_{50} (Rats)

The diluted compound was fed by stomach tube to Sprague-Dawley strain albino rats.

After the approximate Minimum Lethal Dose was determined, groups of male and female rats were fed in increasing doses at increments of 0.1 fractional log intervals at four levels designed to blanket the toxicity range thereby supplying data for calculation of the LD_{50} which was done according to a modification of the method of E. J. de Beer.

Observations were made for toxic symptoms and the viscera of the animals that succumbed were examined macroscopically.

The data, together with the dilution at which the compound was fed, are shown in Table I.

B) Skin Absorption MLD (Rabbits)

The diluted compound was applied in increasing doses at increments of 0.2 fractional log intervals to the closely clipped, intact skin of New Zealand white female rabbits.

The treated areas were covered with plastic strips and the animals placed in wooden stocks for periods up to twenty-four hours, after which time they were assigned to individual cages.

Observations were made for toxic symptoms and the viscera of the animals that succumbed were examined macroscopically.

The data, together with the dilution at which the compound was applied, are shown in Table II.

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SUMMARY -

Aroclor 1262

A) Oral LD_{50} (Rats)

The Oral LD_{50} for male and female rats was placed at 11,300 milligrams per kilogram with lower and upper limits of 9940 to 12,880 milligrams per kilogram.

The compound was classed as practically non-toxic by oral ingestion in male and female rats.

B) Skin Absorption MLD (Rabbits)

The Minimum Lethal Dose by skin absorption in female rabbits was found to be greater than 1260 milligrams per kilogram and less than 3160 milligrams per kilogram.

There was one death and one survival at 2000 milligrams per kilogram.

The compound was classed as mildly toxic by skin absorption in female rabbits.

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Fred M. Younger

BY: FRED M. YOUNGER

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TABLE I

THE ORAL LD_{50} OF 'Aroclor 1262' FOR RATS

Sample Fed As A 50.0% Solution In Corn Oil

Animal No. - Sex	Weight Gm.	Dose Mg./Kg.	Fate
1- Female	230	7,940	Survived
2- Female	215	7,940	Survived
3- Female	220	7,940	Survived
4- Male	235	7,940	Survived
5- Male	250	7,940	Survived
6- Male	230	10,000	Died
7- Female	215	10,000	Survived
8- Female	225	10,000	Died
9- Female	220	10,000	Survived
10- Male	230	10,000	Survived
11- Male	245	12,600	Died
12- Male	225	12,600	Died
13- Female	210	12,600	Survived
14- Female	220	12,600	Died
15- Female	225	12,600	Survived
16- Male	235	15,800	Died
17- Male	245	15,800	Died
18- Male	240	15,800	Died
19- Female	215	15,800	Died
20- Male	230	15,800	Died

DISCUSSION -

The Oral LD_{50} for male and female rats was placed at 11,300 milligrams per kilogram with lower and upper limits of 9940 to 12,880 milligrams per kilogram.

The compound was classed as practically non-toxic by oral ingestion in male and female rats.

Survival time was one to six days with most deaths occurring in three days.

Toxic symptoms included severe diarrhea, loss of appetite, lethargy, and increasing weakness.

At autopsy there was inflammation of the gastric mucosa, tissue edema, and liver congestion macroscopically.

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T A B L E II

THE MINIMUM LETHAL DOSE OF 'Aroclor 1262'

BY SKIN ABSORPTION IN RABBITS

Sample Applied As A 50.0% Solution In Corn Oil

Animal No. - Sex	Weight Kg.	Dose Mg./Kg.	Weight Change 5 Days Later Kg.	Fate
1 - Female	2.2	794	- 0.1	Survived
2 - Female	2.7	1260	- 0.2	Survived
3 - Female	2.5	2000	- 0.3	Died -- 7 Days
4 - Female	2.6	2000	- 0.2	Survived
5 - Female	2.4	3160	- 0.5	Died -- 8 Days
6 - Female	2.7	5010	- 0.3	Died -- 5 Days

DISCUSSION -

The Minimum Lethal Dose by Skin Absorption in female rabbits was found to be greater than 1260 milligrams per kilogram and less than 3160 milligrams per kilogram. There was one death and one survival at 2000 milligrams per kilogram.

The compound was classed as mildly toxic by skin absorption in female rabbits.

Survival time was five to eight days.

Toxic symptoms included poor appetite with resultant loss of weight, nervousness, increasing weakness, and sudden collapse.

At autopsy there was pulmonary hyperemia, liver discoloration, and renal congestion.

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