YOUNGER LABORATORIES
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Certificate of Analysis

June 25th, 1962

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SUBJECT -

Toxicological Investigation Of: Aroclor 1260

Monsanto Sample Number 39
Monsanto Project Number Y-62-37

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 1260

A) Oral LD_{50} (Rats)

The Oral LD_{50} for male and female rats was placed at 10,000 milligrams per kilogram with lower and upper limits of 8,600 to 11,600 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 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 'Arochlor 1260' FOR RATS

Sample Fed As A 50.0% Solution In Corn Oil

Animal No. - Sex	Weight Gm.	Dose Mg./Kg.	Fate
1- Female	215	6,310	Survived
2- Female	230	6,310	Survived
3- Female	220	6,310	Survived
4- Male	245	6,310	Survived
5- Male	235	6,310	Survived
6- Male	250	7,940	Survived
7- Female	220	7,940	Survived
8- Female	210	7,940	Survived
9- Female	215	7,940	Died
10- Male	240	7,940	Survived
11- Male	225	10,000	Died
12- Male	235	10,000	Survived
13- Female	210	10,000	Survived
14- Female	225	10,000	Died
15- Female	210	10,000	Died
16- Male	230	10,000	Survived
17- Male	235	12,600	Died
18- Male	220	12,600	Died
19- Female	210	12,600	Survived
20- Female	215	12,600	Died
21- Male	240	12,600	Died

DISCUSSION -

The Oral LD_{50} for male and female rats was placed at 10,000 milligrams per kilogram with lower and upper limits of 8,600 to 11,600 milligrams per kilogram.

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

Survival time was two to five days with most deaths occurring in three days.

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

At autopsy there was inflammation of the gastric mucosa and liver hyperemia macroscopically.

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TABLE II

THE MINIMUM LETHAL DOSE OF 'Aroclor 1260' 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	1.9	501	+ 0.1	Survived
2 - Female	2.2	794	0.0	Survived
3 - Female	2.4	1260	0.0	Survived
4 - Female	2.6	2000	- 0.4	Died — 8 Days
5 - Female	2.4	2000	- 0.4	Died — 7 Days
6 - Female	2.4	3160	- 0.5	Died — 7 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 2000 milligrams per kilogram.

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

Survival time was seven to eight days.

Toxic symptoms included weight loss after two to three days with increasing weakness followed by collapse in six to seven days.

At autopsy there was evidence of liver dysfunction and renal hyperemia macroscopically.

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