

YOUNGER LABORATORIES

Biochemists . . . Pharmacologists . . . Analysts

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Certificate of Analysis

June 6th, 1962

SUBJECT -

Toxicological Investigation Of: Prochlor 1232
Monsanto Sample Number 54
Monsanto Project Number Y-62-52

STUDY CONDUCTED FOR -

Monsanto Chemical Company, St. Louis, Missouri

EXPERIMENTAL PROCEDURE -

A) Oral LD₅₀ (Rats)

The undiluted 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 LD₅₀ 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 are shown in Table I.

B) Skin Absorption LD (Rabbits)

The undiluted 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 are shown in Table II.

DSW 552951

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SUMMARY -

Aroclor 1232

A) Oral LD₅₀ (Rats)

The Oral LD₅₀ for male and female rats was placed at 4470 milligrams per kilogram with lower and upper limits of 3490 to 5720 milligrams per kilogram.

The compound was classed as slightly 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.

YOUNGER LABORATORIES



BY: FRED M. YOUNGER

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— Monsanto Chemical Company

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STLCOPCB4091369

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T A B L E I

THE ORAL LD₅₀ OF 'Aroclor 1232' FOR RATS

Sample Fed Undiluted

Animal No. - Sex	Weight Gm.	Dose Mg. / Kg.	Fate
1- Female	210	3160	Survived
2- Female	200	3160	Died
3- Female	215	3160	Survived
4- Male	235	3160	Survived
5- Male	225	3160	Survived
6- Male	245	3980	Survived
7- Female	220	3980	Survived
8- Female	220	3980	Died
9- Female	210	3980	Survived
10- Male	230	3980	Died
11- Male	225	5010	Survived
12- Male	250	5010	Died
13- Female	210	5010	Survived
14- Female	220	5010	Died
15- Female	225	5010	Died
16- Male	235	6310	Died
17- Male	230	6310	Survived
18- Male	220	6310	Died
19- Female	205	6310	Died
20- Male	230	6310	Died

DISCUSSION -

The Oral LD₅₀ for male and female rats was placed at 4470 milligrams per kilogram with lower and upper limits of 3490 to 5720 milligrams per kilogram.

The compound was classed as slightly toxic by oral ingestion in male and female rats.

Survival time was less than twenty-four hours to four days with most deaths occurring in two days.

Toxic symptoms included sharply reduced appetite, lethargy, diarrhea, and increasing weakness.

At autopsy there was renal and liver congestion as well as inflammation of the gastric mucosa.

DSW 552953

STLCOPCB4091370

T A B L E II

THE MINIMUM LETHAL DOSE OF 'Aroclor 1232'
BY SKIN ABSORPTION IN RABBITS

Sample Applied Undiluted

Animal No. - Sex	Weight K g .	Dose Mg. / Kg.	Weight Change 5 Days Later Kg.	Fate
1 - Female	2.1	794	+ 0.1	Survived
2 - Female	2.1	1260	0.0	Survived
3 - Female	2.4	2000	- 0.3	Died -- 7 Days
4 - Female	2.2	2000	- 0.4	Died -- 9 Days
5 - Female	2.5	3160	- 0.5	Died -- 5 Days
6 - Female	2.7	5070	-----	Died -- 4 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 four to nine days.

Toxic symptoms included reduced appetite, gradual wasting, lethargy, and weakness after several days to the point of collapse.

At autopsy there was liver discoloration and pulmonary hyperemia macroscopically.