PROJECT NO. X-62-43
REPORT FILE

YOUNGER LABORATORIES
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# *Certificate of Analysis*

July 17th, 1962

SUBJECT -

Toxicological Investigation Of: Aroclor 2565

Monsanto Sample Number 45
Monsanto Project Number X-62-43

STUDY CONDUCTED FOR -

Monsanto Chemical Company, St. Louis, Missouri

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 2565

A) Oral $LD_{50}$ (Rats)

The Oral $LD_{50}$ for male and female rats was placed at 6310 milligrams per kilogram with lower and upper limits of 5,360 to 7,420 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 2000 milligrams per kilogram and less than 3160 milligrams per kilogram.

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

YOUNGER LABORATORIES

BY: FRED M. YOUNGER

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— Monsanto Chemical Company

## TABLE I

### THE ORAL $LD_{50}$ OF 'Aroclor 2565' FOR RATS

Sample Fed As A 20.0% Solution In Corn Oil

| Animal No. - Sex | Weight Gm. | Dose Mg./Kg. | Fate |
|---|---|---|---|
| 1- Female | 195 | 5,010 | Survived |
| 2- Female | 210 | 5,010 | Died |
| 3- Female | 215 | 5,010 | Survived |
| 4- Male | 230 | 5,010 | Survived |
| 5- Male | 220 | 5,010 | Survived |
| 6- Male | 240 | 6,310 | Survived |
| 7- Female | 215 | 6,310 | Died |
| 8- Female | 230 | 6,310 | Survived |
| 9- Female | 210 | 6,310 | Survived |
| 10- Male | 240 | 6,310 | Died |
| 11- Male | 225 | 7,940 | Died |
| 12- Male | 250 | 7,940 | Survived |
| 13- Female | 210 | 7,940 | Died |
| 14- Female | 215 | 7,940 | Died |
| 15- Female | 225 | 7,940 | Died |
| 16- Male | 235 | 10,000 | Died |
| 17- Male | 240 | 10,000 | Died |
| 18- Male | 230 | 10,000 | Died |
| 19- Female | 230 | 10,000 | Died |
| 20- Female | 215 | 10,000 | Died |

DISCUSSION -

The Oral $LD_{50}$ for male and female rats was placed at 6310 milligrams per kilogram with lower and upper limits of 5360 to 7420 milligrams per kilogram.

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

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

Toxic symptoms included weight loss, increasing weakness, dyspnea, and salivation.

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

## TABLE II

## THE MINIMUM LETHAL DOSE OF 'Aroclor 2565'

## BY SKIN ABSORPTION IN RABBITS

Sample Applied As A 20.0% Solution In Corn Oil

| Animal No. - Sex | Weight Kg. | Dose Mg./Kg. | Weight Change 5 Days Later Kg. | Fate |
|---|---|---|---|---|
| 1 - Female | 2.3 | 794 | 0.0 | Survived |
| 2 - Female | 2.1 | 1260 | 0.0 | Survived |
| 3 - Female | 2.5 | 2000 | - 0.2 | Survived |
| 4 - Female | 2.3 | 2000 | - 0.1 | Survived |
| 5 - Female | 2.5 | 3160 | - 0.2 | Died - 14 Days |
| 6 - Female | 2.4 | 5010 | - 0.3 | Died - 8 Days |

DISCUSSION -

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

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

Survival time was eight to fourteen days.

Toxic symptoms included weakness in animals #5 and #6 after several days, reduced appetite, lethargy, and weight loss.

At autopsy there was liver discoloration and pulmonary hyperemia macroscopically.