Scientific Associates

1474 S. Vandeventer Ave. · St. Louis 10, Mo.

November 10, 1953

CERTIFICATE OF ANALYSIS

SUBJECT -

The Acute Oral Toxicity (LD_{50}) of Aroclor 1254 For Rats.

TEST CONDUCTED FOR -

Monsanto Chemical Company, St. Louis, Missouri.

Monsanto Project No.: SA-15

DEPOSITION EXHIBIT 18 KELLY
PENCAD-Bayonne, N.J.

EXPERIMENTAL PROCEDURE -

The LD_{50} was determined by the introduction of measured single doses of undiluted Aroclor 1254 into the stomachs of Sprague Dawley strain albino rats by means of a rubber catheter attached to a hypodermic syringe. Animals weighing 175 to 250 grams were used in the test.

After the approximate Minimum Lethal Dose was found, groups of animals were fed at 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 Bliss (Quart. J. Pharm. and Pharmacol., 11, 1938). The data based on results obtained from a total of 41 rats are found in Table I.

Selected animals from those receiving a lethal dose were autopsied and macroscopic examination made of the viscera.

SCM 004052

This is a confidential report which may be used when requested by physicians and health officials, but is not to be used in any form of advertising without written permission.

TABLE I

THE LD_{50} OF AROCLOR 1254 FOR RATS

Animal No.- Sex	Weight Grams	Dose Ml./Kg.	Fate
1- Male	225	2.50	Survived
2- Male	115		Died
3- Male	240		Survived
4- Female	185		Survived
5- Female	195		Survived
6- Male	220		Died
7- Female	200		Died
8- Female	175		Survived
9- Female	190		Survived
10- Male	230		Survived
11- Male	250	3.00	Died
12- Male	215		Died
13- Female	205		Survived
14- Female	190		Survived
15- Female	180		Survived
16- Male	210		Died
17- Male	230		Survived
18- Male	240		Survived
19- Male	225		Died
20- Female	185		Survived
21- Female	195	3.25	Died
22- Female	205		Died
23- Male	210		Survived
24- Male	230		Survived
25- Male	235		Died
26- Male	245		Died
27- Female	200		Survived
28- Female	180		Died
29- Male	190		Died
30- Female	215		Died
31- Female	209		Survived
32- Female	190	3.75	Died
33- Male	240		Died
34- Male	230		Survived
35- Male	245		Died
36- Female	180		Survived
37- Female	190		Died
38- Female	185		Died
39- Male	225		Died
40- Male	210		Died
41- Male	240		Died

COPY

WATER_PCB-SD0000032676

DISCUSSION -

The LD_{50} was calculated to be 3.10 milliliters per kilogram with upper and lower limits of 2.98 to 3.24 milliliters per kilogram. Survival time ranged from 1 to 6 days with the majority of deaths occurring in 2 to 3 days. There was moderate diarrhea, lethargy, and poor appetite in all of the animals.

At autopsy the liver varied from a straw color to dark red in different viscera. The intestinal tract was irritated with mucus present in several instances.

SUMMARY -

The LD_{50} of Aroclor 1254 for rats was found to be 3.10 milliliters per kilogram. Fiducial limits were 2.98 to 3.24 milliliters per kilogram.

COPY

SCIENTIFIC ASSOCIATES

Fred M. Younger

BY: FRED M. YOUNGER

WATER_PCB-SD0000032677