

YOUNGER LABORATORIES

Biochemists ... Pharmacologists ... Analysts

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Certificate of Analysis

November 9th, 1966

SUBJECT -

Toxicological Investigation Of: PYDRAUL 625

Monsanto Sample Number 187

Monsanto Project Number Y-66-162

STUDY CONDUCTED FOR -

Monsanto Company, St. Louis, Missouri

EXPERIMENTAL PROCEDURE -

A) Oral LD₅₀ (Rats, Mixed Sex)

The undiluted compound was fed by stomach tube to Sprague-Dawley strain albino male and female 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 MLD (Rabbits, Mixed Sex)

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 male and 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.

MONS 037908

To: Monsanto Company
St. Louis, Missouri
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SUMMARY -

PYDRAUL 625

A) Oral LD₅₀ (Rats, Mixed Sex)

The Oral LD₅₀ for male and female rats was placed at 20,700 milligrams per kilogram with lower and upper limits of 17,390 to 24,630 milligrams per kilogram.

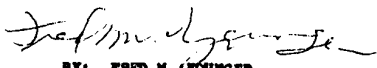
The compound was classed as practically non-toxic by oral ingestion in male and female rats.

B) Skin Absorption MLD (Rabbits, Mixed Sex)

The Minimum Lethal Dose by Skin Absorption in male and 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 male and female rabbits.

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BY: FRED M. YOUNGER

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- Monsanto Company

MONS 037909

T A B L E I

THE ORAL LD₅₀ OF 'PYDRAUL 625' FOR RATS

Sample Fed Undiluted

<u>Animal No. - Sex</u>	<u>Weight</u> <u>Gm.</u>	<u>Dose</u> <u>Mg./Kg.</u>	<u>Fate</u>
1- Female	225	12,600	Survived
2- Male	250	12,600	Survived
3- Female	210	12,600	Survived
4- Male	240	12,600	Survived
5- Female	215	12,600	Survived
6- Male	235	15,800	Survived
7- Female	220	15,800	Died
8- Male	245	15,800	Survived
9- Female	215	15,800	Survived
10- Male	250	15,800	Survived
11- Female	225	20,000	Survived
12- Male	235	20,000	Survived
13- Female	220	20,000	Died
14- Male	255	20,000	Survived
15- Female	210	20,000	Died
16- Male	260	25,100	Survived
17- Female	230	25,100	Died
18- Male	240	25,100	Died
19- Female	215	25,100	Died
20- Male	250	25,100	Died

DISCUSSION -

The Oral LD₅₀ for male and female rats was placed at 20,700 milligrams per kilogram with lower and upper limits of 17,590 to 24,630 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.

Toxic symptoms included loss of appetite, diarrhea, increasing weakness, dyspnea, and collapse.

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

TABLE II
THE MINIMUM LETHAL DOSE OF 'PYDRAUL 625'
BY SKIN ABSORPTION IN RABBITS

Sample Applied Undiluted

Animal No. - Sex	Weight Kg.	Dose Mg./Kg.	Weight Change 5 Days Later Kg.	Fate
1 - Male	3.1	794	+ 0.1	Survived
2 - Female	2.5	1260	+ 0.1	Survived
3 - Male	3.0	2000	- 0.1	Survived
4 - Female	2.7	3160	- 0.3	Died -- 9 Days
5 - Male	2.8	5010	- 0.4	Died -- 7 Days
6 - Female	2.5	7940	- 0.3	Died -- 5 Days

DISCUSSION -

The Minimum Lethal Dose by Skin Absorption in male and 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 male and female rabbits.

Survival time was five to nine days.

Toxic symptoms included weakness in two to three days followed by paralysis.

At autopsy the lungs were hemorrhagic and there was liver discoloration.

MONS 037911