PROJECT NO. Y-66-160
PORT FILE

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YOUNGER LABORATORIES

Biochemists . . . Pharmacologists . . . Analysts

123 CLIFF CAVE ROAD
SAINT LOUIS, MO., 63129
PHONE: TILDEN 6-2540

Certificate of Analysis

November 9th, 1966

SUBJECT -

Toxicological Investigation Of: PYDRAUL 135

Monsanto Sample Number 185

Monsanto Project Number Y-66-160

STUDY CONDUCTED FOR -

Monsanto Company, St. Louis, Missouri

EXPERIMENTAL PROCEDURE -

A) Oral LD_{50} (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 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 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.

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To: Monsanto Company
St. Louis, Missouri
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SUMMARY -

PYDRAUL 135

A) Oral LD_{50} (Rats, Mixed Sex)

The Oral LD_{50} for male and female rats was placed at 4200 milligrams per kilogram with lower and upper limits of 3025 to 5840 milligrams per kilogram.

The compound was classed as slightly 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 1260 milligrams per kilogram and less than 2000 milligrams per kilogram.

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

YOUNGER LABORATORIES

BY: FRED M. YOUNGER

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— Monsanto Company

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T A B L E I

THE ORAL LD_{50} OF 'PYDRAUL 135' FOR RATS

Sample Fed Undiluted

Animal No. - Sex	Weight Gm.	Dose Mg./Kg.	Fate
1- Female	210	3160	Survived
2- Male	235	3160	Survived
3- Female	220	3160	Died
4- Male	245	3160	Survived
5- Female	215	3160	Survived
6- Male	255	3980	Died
7- Female	225	3980	Died
8- Male	250	3980	Survived
9- Female	220	3980	Died
10- Male	265	3980	Survived
11- Female	215	5010	Survived
12- Male	240	5010	Died
13- Female	230	5010	Died
14- Male	265	5010	Survived
15- Female	225	5010	Died
16- Male	270	6310	Died
17- Female	230	6310	Died
18- Male	245	6310	Survived
19- Female	230	6310	Died
20- Male	265	6310	Died

DISCUSSION -

The Oral LD_{50} for male and female rats was placed at 4200 milligrams per kilogram with lower and upper limits of 3025 to 5840 milligrams per kilogram.

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

Survival time was several hours to three days.

Toxic symptoms included tremors in two to three hours, diarrhea, loss of appetite, and coma of six to eight hours duration.

At autopsy there was renal, liver, and pulmonary hyperemia in addition to inflammation of the gastrointestinal mucosa.

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T A B L E II

THE MINIMUM LETHAL DOSE OF 'PYDRAUL 135'
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	2.8	501	- 0.1	Survived
2 - Female	2.4	794	- 0.1	Survived
3 - Male	3.0	1260	- 0.2	Survived
4 - Female	2.6	2000	- 0.2	Died - 11 Days
5 - Male	2.8	3160	- 0.4	Died -- 9 Days
6 - Female	2.5	5010	- 0.3	Died -- 8 Days

DISCUSSION -

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

Survival time was eight to eleven days.

Toxic symptoms included reduced activity, loss of appetite, marked weakness, and collapse.

At autopsy there was liver discoloration and renal hyperemia macroscopically.

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