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TOXICOLOGY DEPARTMENT
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8EHQ-92-12203

October 5, 1992

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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Document Processing Center (TS-790)
Office of Toxic Substances
US Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Attn: Section 8(e) Coordinator (CAP Agreement)

RE: Report Submitted Pursuant to the TSCA Section 8(e) Compliance Audit Program

CAP ID No.: 8ECAP - 0004

Dear Sir/Madam:

On behalf of Rhône-Poulenc Inc. (RPI, CN 5266, Princeton, NJ 08543-5266) and its subsidiary Rhône-Poulenc Ag Company, the attached study report is being submitted to the Environmental Protection Agency (EPA) pursuant to the Toxic Substances Control Act (TSCA) Section 8(e) Compliance Audit Program and the Agreement for a TSCA Section 8(e) Compliance Audit Program (CAP Agreement) executed by RPI and EPA.

The enclosed study report provides information on MC 2571. The CAS number and name for this chemical are 21409-78-9 and phosphorothioic acid, O-(1,2-dihydro-1,6-dimethyl-2-oxo-4-pyridinyl) O,O-diethyl ester. This chemical was synthesized for pesticide research and development approximately 20 to 25 years ago. To our knowledge, a pesticide application on this chemical has never been submitted to EPA under the Federal Insecticide, Fungicide, and Rodenticide Act.

No claims of confidentiality are made for this submission. The title of the enclosed report is "Acute Oral Toxicity Study in Rats with Mobil Chemical Company's Compound Identified as: MC 2751". The following is a summary of the adverse effects observed in this study.

This study is being submitted under Section 8(e) because the oral LD50 was determined to be 5.97 mg/kg with 95% confidence limits of 4.25 to 8.39 mg/kg. Also, dosing at 6.25 mg/kg produced trembling, salivation, and increased respiratory rate. Death in 3 out of 5 rats at this dose was preceded by convulsions. At 12.5 mg/kg, salivation, increased respiratory rate, and trembling were observed prior to death. All animals in this group died with one hour of dosing.

No previous TSCA Section 8(e) notices have been submitted on this chemical. In total, RPI is submitting three copies of the enclosed report and this cover letter: an original and two copies.

UC
RECEIVED
1/26/95

Further questions regarding this submission may be directed to the undersigned at 919-549-2222.

Sincerely,



Glenn S. Simon, PhD, DABT
Director of Toxicology

Kaufman (3)

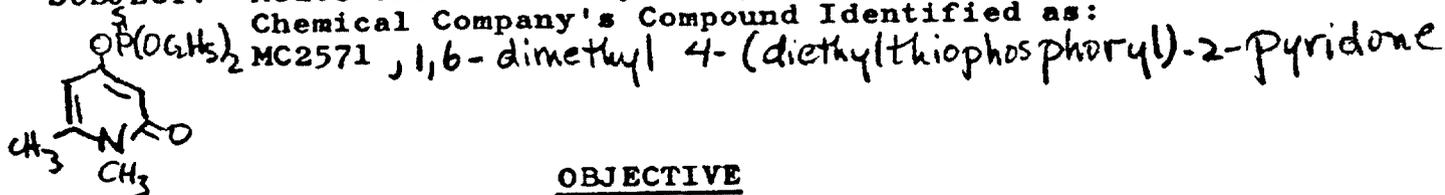
PROJECT: #20-249

DATE: April 19, 1968

SPONSOR: MOBIL CHEMICAL COMPANY

SUBJECT: Acute Oral Toxicity Study in Rats with Mobil

Chemical Company's Compound Identified as:



OBJECTIVE

To study the acute oral toxicity in rats of Mobil Chemical Company's Compound identified as MC2571 when administered by means of a stomach catheter.

MATERIAL

Compound MC2571 supplied by Mobil Chemical Company for use in this study.

PROCEDURE

An approximation of the LD₅₀ was attained by administering the chemical compound to a number of rats on each of several levels. Following this a group of young adult male albino rats of the Sprague-Dawley strain weighing approximately 200-250 grams was selected for use in this study. The animals were divided into subgroups of five animals each and fasted for twenty-four hours prior to dosing.

The experimental material was placed in a syringe and introduced through the esophagus into the stomach with a stainless steel catheter.

Five rats were dosed at 3.12 mg/kg with a 1.0% w/v solution in water (i.e., 10 mg in 1 ml or 100 mg in 10 ml.) Five rats were dosed at 6.25 mg/kg with a 1.0% w/v solution in water and five were dosed at 12.5 mg/kg also with a 1.0% w/v solution in water.

Animals on the same dosage levels were then placed in a common cage with free access to food and water. The cages employed had wire mesh floors elevated above the droppings and were kept in temperature controlled rooms at 72°F ± 2°F. Light was furnished for eight out of every twenty-four hour period.

The animals were observed for a fourteen day period and deaths were recorded.

The LD₅₀ was calculated using the Thompson Moving Average Method (Biometrics, September, 1952, Volume 8, No. 3).

RESULTS

Dosage mg/kg	No. of Animals	Number and Days of Death														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	S*	D**
1.06		Zero Deaths Assumed															
3.12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
6.25	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
12.50	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5

*Survivors

**Deaths

-3-

Within five minutes of dosing all rats on the 12.50 mg/kg level evidenced increased salivation, increased respiratory rate, trembling of the entire body and exophthalmos. All rats died within one hour of dosing.

The five rats on the 6.25 mg/kg level exhibited trembling of the entire body, increased salivation and increased respiratory rate within 10 minutes of dosing. Death in the three rats in this group was preceded by several convulsions within a two minute period. Mortalities occurred within 45 minutes for two rats and in approximately 3 hours for one other rat. Two rats recovered within 45 minutes of dosing.

The rats on the 3.12 mg/kg level had no clinical signs.

Since no evidence of a reaction to this compound was shown on the 3.12 mg/kg level, it was assumed that there would be no clinical signs at the next level, 1.06 mg/kg.

CONCLUSION

The oral LD₅₀ of Mobil Chemical Company's compound MC2571 is 5.97 mg/kg with a 95% confidence limit of 4.25 mg/kg to 8.386 mg/kg.

SUBMITTED BY

Harry C. Fegley
Harry C. Fegley, V.M.D.
Director



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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Research Triangle Park, North Carolina 27709

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

APR 24 1995

EPA acknowledges the receipt of information submitted by your organization under Section 8(e) of the Toxic Substances Control Act (TSCA). For your reference, copies of the first page(s) of your submission(s) are enclosed and display the TSCA §8(e) Document Control Number (e.g., 8EHQ-00-0000) assigned by EPA to your submission(s). Please cite the assigned 8(e) number when submitting follow-up or supplemental information and refer to the reverse side of this page for "EPA Information Requests".

All TSCA 8(e) submissions are placed in the public files unless confidentiality is claimed according to the procedures outlined in Part X of EPA's TSCA §8(e) policy statement (43 FR 11110, March 16, 1978). Confidential submissions received pursuant to the TSCA §8(e) Compliance Audit Program (CAP) should already contain information supporting confidentiality claims. This information is required and should be submitted if not done so previously. To substantiate claims, submit responses to the questions in the enclosure "Support Information for Confidentiality Claims". This same enclosure is used to support confidentiality claims for non-CAP submissions.

Please address any further correspondence with the Agency related to this TSCA 8(e) submission to:

Document Processing Center (7407)
Attn: TSCA Section 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Washington, D.C. 20460-0001

EPA looks forward to continued cooperation with your organization in its ongoing efforts to evaluate and manage potential risks posed by chemicals to health and the environment.

Sincerely,

Terry R. O'Bryan

Terry R. O'Bryan
Risk Analysis Branch

Enclosure

12203A



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contains at least 50% recycled fiber

Triage of 8(e) Submissions

Date sent to triage: 12/14/95

NON-CAP

CAP

Submission number: 12203 A

TSCA Inventory:

Y N D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO AQUATO

Group 2 - Ernie Falke (1 copy total)

ATOX SBTOX SEN w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX CTOX EPI RTOX GTOX
STOX/ONCO CTOX/ONCO IMMUNO CYTO NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

For Contractor Use Only	
entire document: <u>0</u> 1 2 pages <u>1/2</u>	pages <u>1-5</u>
Notes:	
Contractor reviewer: <u>LPS</u>	Date: <u>4/11/95</u>

CECATS/TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA: Submission # SEHO-1092-12203 SEQ. A
 TYPE: INT. SUPP FLWP
 SUBMITTER NAME: Rhone-Poulenc Inc.

INFORMATION REQUESTED: FLWP DATE
 6561 NO INFO REQUESTED
 6562 INFO REQUESTED (TECH)
 6563 INFO REQUESTED (VOL. ACTIONS)
 6564 INFO REQUESTED (REPORTING RATIONALE)
 DISPOSITION:
 6570 REFER TO CHEMICAL SCREENING
 6570 CAP NOTICE

VOLUNTARY ACTIONS:
 6697 NO ACTION REPORTED
 6697 STUDIES PLANNED (INDIVIDUAL)
 6697 MONITORING IN WORK IN PROGRESS
 6698 LABORATORY TESTS
 6698 PROFESSIONAL INQUIRY
 6698 APPROUSE DISCONTINUED
 6697 PRODUCTION DISCONTINUED
 6698 CONFIDENTIAL

SUB. DATE: 10/05/92 OTS DATE: 10/13/92 CSRAD DATE: 04/26/95

CHEMICAL NAME: Phosphorothioic acid, O-(1,2-dihydro-1,1-dimethyl-2-oxo-4-pyridinyl)O,O-diethyl ester
 CASE: 21409-78-9

INFORMATION TYPE	P.F.C.	INFORMATION TYPE	P.F.C.
0201 ONCO (HUMAN)	01 02 04	0216 EPICLIN	01 02 04
0202 ONCO (ANIMAL)	01 02 04	0217 HUMAN EXPOS (PROD CONTAM)	01 02 04
0203 CELL TRANS (IN VITRO)	01 02 04	0218 HUMAN EXPOS (ACCIDENTAL)	01 02 04
0204 MUTA (IN VITRO)	01 02 04	0219 HUMAN EXPOS (MONITORING)	01 02 04
0205 MUTA (IN VIVO)	01 02 04	0220 BODWATER TOX	01 02 04
0206 REPRO/TERATO (HUMAN)	01 02 04	0221 ENV. OCCURENCE/FATE	01 02 04
0207 REPRO/TERATO (ANIMAL)	01 02 04	0222 EMER INC OF ENV CONTAM	01 02 04
0208 NEURO (HUMAN)	01 02 04	0223 RESPONSE REQSRT DELAY	01 02 04
0209 NEURO (ANIMAL)	01 02 04	0224 PRODUCTION RATIONALE	01 02 04
0210 ACUTE TOX. (HUMAN)	01 02 04	0225 REPORTING RATIONALE	01 02 04
0211 CHR. TOX. (HUMAN)	01 02 04	CONFIDENTIAL	01 02 04
0212 ACUTE TOX. (ANIMAL)	01 02 04	0226 ALLERG (HUMAN)	01 02 04
0213 SUB ACUTE TOX (ANIMAL)	01 02 04	0227 ALLERG (ANIMAL)	01 02 04
0214 SUB CHRONIC TOX (ANIMAL)	01 02 04	0228 METAB/PHARMACOD (ANIMAL)	01 02 04
0215 CHRONIC TOX (ANIMAL)	01 02 04	0229 METAB/PHARMACOD (HUMAN)	01 02 04

IRREGULAR NAME	NON-CELL INVENTORY	CONCORDANCE REVIEW	SEXES	TOXICOLOGICAL CONCERNS	USE	PRODUCTION
CAS SR	YES	YES (DROP/REFER)	RAT	LOW	R-D	Pesticide
	NO	NO (CONTINUE)		MED		
		REFER		HIGH		

12203A

H

Acute oral toxicity in the rat is of high concern based on an LD₅₀ of 5.97 mg/kg. Male Sprague-Dawley rats (5/dose) received gavage doses of 3.12, 6.25, and 12.0 mg/kg. Deaths were as follows: 0/5, 3/5, and 5/5. No clinical signs were observed at the lowest dose. Clinical signs at the higher doses included salivation, and increased respiration, with convulsions in animals that died at 6.25 mg/kg, and trembling and exophthalmos at 12.50 mg/kg.