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DATA EVALUATION REPORT

STUDY TYPE: Acute Inhalation Toxicity in Rats.

TOX. CHEM. NO.: New Chemical 129032

ACCESSION NUMBER: D179381

MRID NO: 421783-04; Amended MRID #41827-13.

TEST MATERIAL: (2-[1-methyl-2-(4-phenoxyphenoxy) ethoxy] pyridine.

SYNONYMS: Sumilarv; S-31183.

STUDY NUMBER(S): GLN 81-3.

SPONSOR: Sumitomo Chemical Co., Osaka, Japan.

TESTING FACILITY: Sumitomo Chemical Company, Limited. 5-33, Kitahama 4-Chome, Chuo-Ku, Osaka, Japan.

TITLE OF REPORT: Sumilarv -- Acute oral toxicity of S - 31183 in Rats. (Original report written in Japanese, translated by Takachi Suzuki, Feb. 19, 1988.)

AUTHOR(S): Takashi Suzuki

REPORT ISSUED: Number NNT-70-0022, December 3, 1989

GLP Review: Masanori Takatsuka, dated Dec. 1, 1987.

CONCLUSIONS:

Rats were exposed for 4 hours in whole body chambers to mists of Sumilarv at concentrations of 0.6 and 1.3 mg/L. The mean particle sizes were 0.75 to 0.86 um. There were no deaths in either exposure groups. Salivation was observed in two males and one female of the 1.3 mg/L and urinary incontinence was found in two females of the 1.3 mg/L exposure group. These signs disappeared one hour after the termination of the exposure. Body weight gain was slightly depressed three days after exposure but returned to normal by day 7 in the males of the high dose group. Autopsy at the end of 14 days showed no changes that could be related to the test material.

CLASSIFICATION: Toxicity Class III. ~~Core Guideline.~~ ACCEPTABLE

A. MATERIALS:

1. Test compound: S-31183, Technical. Description: White solid, manufactured by Sumitomo Chemical Co. Batch # PTG-86011. Purity: 97.0 %, Contaminants were listed in composition statement.

2. Test animals: Species: Rats. Strain: Sprague Dawley. Age: six weeks. Weight: Males, 172-207; Females 140-174 gm. Source: Charles River Japan, Inc., Knagawa.

Housing: When not in exposure chambers, the animals were maintained in aluminum cages, 5/cage, under standard laboratory conditions with food and water available ad libitum.

B. STUDY DESIGN:

Animal assignment - The animals were randomized using a computer program by Toxipac System 300, Shimadzu Corporation, Kyoto.

Exposure Methods: The animals were exposed for 4 hours to Sumilarv mists in the whole body exposure system depicted in Fig. 1 (attached) taken from page 19 of the report. Sumilarv, desolved in corn oil (50% w/v), was fed into the atomizer (model KN-204 type, Natsume Seisakusho Co., Ltd.) using a syringe pump. The mist from the atomizer was passed through a 3 L bottle which removed larger aerosol particles. The smaller particles were fed into the 64 L exposure chamber to the rats 5 animals/sex/per cage set near the bottom of the chamber. The air flow rate through the chamber was 50 L/min. at temperatures of 23 ± 2 degrees C and humidity of 55 ± 10%.

Chamber Monitoring. The actual concentrations of Sumilarv were measured at one and three hours during the exposure periods. Air samples from the chamber were drawn through a glass column of silica gel powder at a rate of 20 L/min for 10 minutes. The silica gel was extracted with acetone and the Sumilarv in the acetone analyzed using gas chromatography (Shimadzu GC-7A, equipped with a flame ionization detector).

The aerodynamic particle size distribution was measure using 30 to 40 minute samples 5 times/exposure periiod using a Microscopic Sedimentation Analyzer (SA-M1D, Shmadzu Corp.). From the distribution obtained, the median aerodynamic diameter of mist particles was calculated using a Canon DX-10/30 device (Canon, Inc.). The log-standard geometric deviation (LSD) was calculated using a logarithmic probability paper.

Observations. The animals were observed during their

exposure periods at 0.5, 1, 2, 3 and 4 hours and at 1 hour after their exposure and daily for the next 14 days. Body weights were measured before exposures, and on days 3, 7 and 14 thereafter. At the end of the 14 day observation period the animal were subjected to necropsy for gross pathology.

Statistical: The body weights were examined using F-test. The Student's t-test and the Fisher-Behrens's test. were used to determine the significance of other mean differences.

C. RESULTS:

Exposure Conditions. There were 4 groups of animals run:

Group	Concn.of Sumilarv	Particle Size
I. Vehicle Control (Corn oil only)		0.83 um MMAD
II. Negative Control	0.0 Sumilarv	N/A
III. Low level	0.6 mg/L Sumilarv	0.86 um
IV. High level	1.3 mg/L Sumilarv.	0.75 um

There were not deaths or toxic signs resulting from the administration of the test materials. There were no changes in body weights among the different exposure groups as shown in the attached table (Table 6, page 16 taken from the report).

At necropsy, a white substance was observed in the urinary bladders of male rats. Some females had uterine horns distended with fluid. Neither of these finding were related to exposures of Sumilarv.

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Pyriproxyfen

RIN 4445-96 P.C. 129032

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