Data Evaluation Report III-1

CHEMICAL: Cyromazine; TOX Chemical #167B

TEST MATERIAL: Armor; Triguard 5% SC-C

STUDY TYPE: Acute Inhalation LC_{50}; Rat

STUDY IDENTIFICATION: Rat Acute Inhalation Toxicity; Triguard 5% SC-C FL 830406. J.L. Maedgen, Stillmeadow Inc., Houston, TX Project No. 2941-83, August 4, 1983; Study sponsor: CIBA-GEIGY Corp., Greensboro, NC; EPA Accession No. 073074.

REVIEWED BY: Roy D. Sjoblad Ph.D.
Microbiologist
Toxicology Branch, HED
Signature: Roy D. Sjoblad
Date: 2/13/85

APPROVED BY: Clint Skinner Ph.D.
Section Head
Toxicology Branch, HED
Signature: Clint Skinner
Date: 2/13/85

TOX CATEGORY: III

CORE CLASSIFICATION: Guideline

CONCLUSION: At 2.90 mg/l, Triguard 5% SC-C produced no mortalities when inhaled by rats, but piloerection, constricted or dilated pupils, epistaxis, exophthalmos, and respiratory gurgle and wheeze were observed. Discolored, edematous, consolidated and adhered lungs, and discolored surface nodules on lungs were observed upon necropsy.

MATERIALS: Triguard 5% SC-C FL830406; from CIBA-GEIGY Corporation, purity not specified.

Young adult Sprague-Dawley Rat, TAS:(SD); from Texas Animal Specialties, Humble TX.

PROTOCOLS: Five male and 5 female rats were housed individually in stainless steel cages within a 200 liter stainless steel dynamic flow inhalation chamber and were exposed for 4 hours to an aerosol of the undiluted test chemical at 2.90 mg/ml. Portions of the test atmosphere were analyzed for Triguard 5% SC-C at each half-hour by using GC. Nominal concentrations were determined at the end of the exposure period. Ninety-five percent of the particulates at 1 and 3 hours were <15um. Animals were observed for mortality and for clinical signs of toxicity frequently during exposure and at least once daily for the next 14 days. Rats were weighed prior to exposure and on days 7 and 14 after exposure. Gross necropsy was performed on all rats after sacrifice at 14 days after exposure.

REPORTED RESULTS: No animals died as a result of exposure for 4 hours to an aerosol of the test substance at a mean analytical concentration of 2.90 mg/l. The mean analytical concentration range during the study was 1.806 to 4.971 mg/l.

The clinical sign of toxicity most frequently observed during the first 24 hours after dosing was piloerection. At 4.5 and 6 hours after dosing, all test animals exhibited very slight to moderate piloerection. This symptom was not observed in any test animal at 4 days after exposure. Less frequently observed signs of toxicity during exposure were constricted pupils, respiratory gurgle, dilated pupils, epistaxis (in 1 male only), and exophthalmos (in 1 female only). These signs of toxicity had disappeared in females at the 24 hour observation interval. By 3 days after exposure, all male rats were free from clinical signs of toxicity. Gross internal necropsy showed discolored lungs (usually pink or red) in 9/10 of the test rats. A few blue-red or numerous blue-gray nodules were observed on the surface of lungs from 3 rats. Edematous or consolidated lungs were observed in 5/10 of the test animals. In one male rat, the heart and lungs were encapsulated in off-white fibrous material, which also was adhered to the thoracic wall and diaghram. Female rats gained from 5 to 10 grams in body weight at day 7 and a further 10 grams at day 14. One male rat lost 20 grams in body weight during the first week of the study. The other male rats gained from 5 to 35 grams in weight at day 7. At day 14, male rats had gained from 0 to 30 grams, when compared to the 7 day weighing period.