

US EPA ARCHIVE DOCUMENT



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

009478

MAY 4 1992

OFFICE OF  
PESTICIDES AND TOXIC  
SUBSTANCES

MEMORANDUM:

Subject: Review of Toxicology Studies with Methanearsonic Acid/Methanearsonic acid, monosodium salt to support reregistration of the test substance. (Toxchem Number 582, HED Project No. 1-1668, Barcode number: D165492)

FROM: Steven L. Malish, Ph.D., Toxicologist *S. L. Malish 4/15/92*  
Tox. Branch II, Review Section IV  
HED (H7509C)

TO: Barbara Briscoe PM (51)/Betty Crompton PM Team Reviewer  
Special Review and Reregistration Division  
HED (H7508W)

THRU: Elizabeth Doyle, Ph.D., Section Head *E. A. Doyle 4/15/92*  
Tox. Section II, Review Section IV  
HED (H7509C)

and

Marcia van Gemert, Ph.D., Branch Chief  
Tox. Branch II  
HED (H7509C) *M van Gemert 4/28/92*

ACTION REQUESTED: Review of toxicology studies for reregistration requirements.

Study Summarized

MRID 416690-01, Combined Chronic Toxicity/Oncogenicity Study - rats (83-5); Core - guideline

Methanearsonic acid was incorporated into the diet of 4 groups of 60 Fischer F344 rats per sex at concentrations of 0, 3.2, 27 and 93 mg/kg/day (males) and 0, 3.8, 3.3 and 101 mg/kg/day ppm (females) for 104 weeks.

A suggestion of an increased incident of parathyroid gland adenomas was seen in males at the intermediate and high levels and in the females at the high level.

Mortality was increased in the high level animals when compared to the respective controls.

Reduced body weight gain occurred in males at the high level and in females at both the intermediate and high levels.

High dose animals showed acute inflammation, mucosal ulceration and perforations of the large intestine (cecum, colon and rectum). The abdominal wall showed evidence of acute or chronic peritonitis. The intermediate dose was similarly but sporadically affected.

Maximum tolerated dose (MTD) = intermediate dose. The NOEL = 3.2 mg/kg/day (males), 3.8 mg/kg/day (females). LOEL (systemic toxicity) = 27 mg/kg/day (males), 33 mg/kg/day (females).

Recommendations:

This study should be referred to the RFD Mini Peer Review for consideration because of the carcinogenic response in the parathyroid gland as evidenced by adenomas seen in males at the intermediate and high dose and in females at the high dose.