

US EPA ARCHIVE DOCUMENT

#582



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

OCT 16 1984

SUBJECT: Monosodium Methanearsonate as Representative Test Material for All Methanearsonates in Toxicological Testing Required by Data Call-In Notice. OFFICE OF PESTICIDES AND TOXIC SUBSTANCES

FROM: Lynn M. Bradley, Chemist  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Chief  
Residue Chemistry Branch  
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TO: Barbara Briscoe, PM Team 50  
Special Review Branch  
Registration Division (TS-767)

and

Toxicology Branch  
Hazard Evaluation Division (TS-769)

The MAA Research Task Force has requested formal acceptance, by the Agency, of its proposal to use technical monosodium methanearsonate as the representative testing material (presumably for oral administration in aqueous form) for methanearsonic acid (MAA), monosodium methanearsonate (MSMA), and disodium methanearsonate (DSMA). The basis for this request is a study demonstrating dissociation, and subsequent protonation, of the salts in the stomach.

RCB has already verbally agreed to the premise that the cation from administration of any of the three materials are equivalent (meeting notes in the methanearsonate file, 4/9/82, verified by Bill Boodee, 10/12/84). We have no reason to alter this position that MAA, MSMA, and DSMA will exist as chemically equivalent cations in the strongly acidic conditions of the stomach. We are unable to comment on the toxicological significance of the other components of the technical MSMA (which would not be present in a solution of MAA) except to note that the guidelines call for use of technical grade material.

RCB is also asked to comment on whether the MSMA studies will be applicable to support the data requirements for other methanearsonate chemicals [specifically, the monoammonium (MAMA), octylammonium (OAMA), dodecylammonium (DAMA), calcium (CAMA), and triethanolamine salts].

We are not able to comment on whether TOX Branch will accept testing on MSMA in support of the other salts. We do not have conclusive data regarding the dissociation of other salts of methanearsonic acid, but IF the other salts dissociate in the same manner as the sodium salts (and they probably do), we can conclude that the methanearsonate portion of the molecule will be the same as that from the MSMA being tested. We are not qualified to comment on whether or how testing should address the toxicity contribution from the anion (salt) portion of the molecule.

We suggest that you consider submitting directly to TOX any questions regarding the use of toxicological testing data on one chemical to support other similar chemicals. RCB is unable to comment on whether or not TOX will accept substitute data for any materials.

cc: LMB, Methanearsonate S.F., Reading file, circ.  
RDI:Section Head:ARRathman:10/15/84:RDSchmitt:10/15/84  
TS-769:Reviewer:LMBradley:10/14/84:CM#2:RM:810:557-7377  
ldt:10/16/84