



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

JAN 24 1995

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Monosodium methanearsonate (MSMA). List B Reregistration Case No. 2395/Chemical ID No. 013803. MAA Task Force Submission of Protocols for Ruminant and Poultry Feeding Studies. CBRS No. 13945. DP Barcode No. D204932.

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The MAA (MSMA/DMSA) Research Task Force Three is sponsoring ruminant and poultry feeding studies, to be conducted by the performing laboratory PTRL East, Inc., of Richmond, KY. The protocols were forwarded to CBRS for review, however, no correspondence that might have been attached to the protocols was included. The In-life portion of the ruminant study was to commence in July, 1994, and the poultry study was scheduled to commence in September, 1994. Ron Kendall (ARB/SRRD; personal communication, 1/9/95) stated that the studies had recently been initiated.

Tolerances are currently established for the selective post-emergence herbicide methanearsonic acid (calculated as As_2O_3) resulting from application of the disodium and monosodium salts of methanearsonic acid in or on cottonseed (0.7 ppm) and in or on citrus fruit (0.35 ppm) [40 CFR §180.289]. A tolerance of 0.9 ppm (expressed as As_2O_3) is established for residues of methanearsonic acid in cottonseed hulls from application of the disodium and monosodium salts of methanearsonic acid in the production of cotton [40 CFR §186.4050].

The methanearsonic acid salts comprise List B reregistration case no. 2395. A Phase 4 review



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was completed 3/28/91 (memo, C. Olinger, CBRS Nos. 6974, 7058, 7097, and 7215); plant metabolism studies were required for cotton, a grass, and a citrus fruit. Lemon and cotton metabolism studies were submitted by the Task Force, and reviewed in the C. Swartz memo of 5/28/93 (CBRS Nos. 9525, 9942, and 10245; DP Barcode Nos. D175070, D178793, and D180717). The lemon metabolism study was acceptable, while the cotton metabolism study was unacceptable but later upgraded (C. Swartz, 5/18/94, CBRS No. 12891, DP Barcode No. D197117). The residues of concern in cottonseed and lemon consist of MSMA and cacodylic acid (CA).

The nature of the residue in ruminants and poultry is tentatively understood. Livestock metabolism studies were submitted by the Task Force, and reviewed in the C. Olinger memo of 4/7/92 (CBRS No. 8647; DP Barcode No. D168990). The studies were found to be unacceptable but upgradable with the submission of additional data pertaining to bound residues, confirmation of lipid conjugation in egg yolks, and a discussion of potential differences in metabolism of DMSA and MSMA (metabolism studies were submitted to satisfy reregistration requirements for both chemicals). The required information was submitted and reviewed by CBRS (memo dated 1/23/95, C. Swartz, CBRS No. 10836, DP Barcode No. D184346). The ruminant and poultry metabolism studies were tentatively upgraded to acceptable, pending subjection of livestock metabolism study samples to total arsenic method analysis.

Based on the results of the metabolism studies in ruminants and poultry, and on maximum 1X ruminant and poultry diets, CBRS tentatively concluded that methanearsonic acid residues (resulting from the application of MSMA and DSMA) can be classified under Category 3 of 40 CFR §180.6(a), i.e. there is no reasonable expectation of finite residues. Therefore, tolerances and feeding studies are not required at this time.

cc: CSwartz; MSMA List B file; RF; SF; Circulation
7509C:CBRS:CSwartz:CM#2:Rm 804F:703 305 5877:8/4/94.
RDI:WJHazel:10/25/94 MS Metzger:1/18/95 FBSuhre:1/20/95