



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

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

JUN 25 1985

TO: Willie Nelson, PM-17
Registration Division

THRU: Michael W. Slimak
Chief,
EEB/HED

THRU: Raymond W. Matheny
Head, Section 1
EEB/HED

Margosan-O is highly toxic to aquatic organisms and may be highly toxic to birds. This toxicity is ascribed to the action of azadriachtin. It is well known that an extraction procedure not only extracts the chemical of interest but also chemicals of similar solubility characteristics and may be similar in structure. These chemicals, thought to be inert, may modify the action, either positively or negatively, of the active ingredient. EEB suggests that this submission be referred to Residue Chemistry Branch so that a determination can be made as to what other chemicals in the extract may be toxic to fish and wildlife.

Pursuant to your request for EEB data requirements, the following is a list of data/information necessary to complete a full hazard assessment for the registration of Margosan-O:

1. Weight of active ingredient to be applied per acre for each crop;
2. Weight of active ingredient per unit volume of concentrate;
- ✓ 3. Seed germination/seedling emergence and vegetative vigor tests *;

4. Molecular weight;

5. Solubility; and

✓ 6. Half-life in soil and water.

* Nontarget plant studies are required by 40 CFR Part 158 when phytotoxicity problems arise that are not fully covered in the open literature. This submission contains indications that there is phytotoxicity to potato and corn plants as well as some growth inhibition in corn and chrysanthemums. Since corn is a major crop in terms of acreage, it would be prudent to assess the phytotoxicity of this product to nontarget plants. The growth and reproduction of aquatic plants is not required at this time because the proposed uses do not include an aquatic crop. However, should an aquatic use be added, this study would be required.



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