

US EPA ARCHIVE DOCUMENT

EEE BRANCH REVIEW

DATE: IN 11/28/78 OUT 9/10/79 IN _____ OUT _____ IN _____ OUT _____
FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 618-75

PETITION OR (EXP. PERMIT NO.) _____

DATE DIV. RECEIVED 7/5/78

DATE OF SUBMISSION _____

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): I, D, H, (F), N, R, S Fungicide

DATA ACCESSION NO(S). 235633

PRODUCT MGR. NO. 21

PRODUCT NAME(S) Thiabendazole (TECH)

COMPANY NAME Merck & Co., Inc.

SUBMISSION PURPOSE data review

CHEMICAL FORMULATION Thiabendazole

2-(4-Thiazolyl) benzimidazole 98.5%

100.0 Pesticide Name

Thiabendazole

100.3 Submission Purpose

Submission of avian acute oral tests and 48-hour LC₅₀ for Daphnia magna.

101.0 Chemical and Physical Properties

101.1 Chemical

2-(4-Thiazolyl) benzimidazole

101.2 Common Name

Thiabendazole

103.0 Toxicological Properties

103.1 Acute Toxicity

103.1.2 Bird

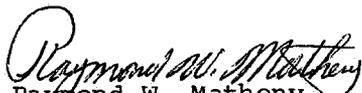
Bobwhite quail LC₅₀: >10,000 ppm
Mallard duck LC₅₀: >4,640 ppm

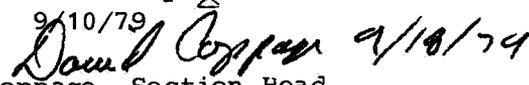
103.1.4 Aquatic Invertebrates

Daphnia magna: 0.31 mg/l (0.26-0.36 mg/l)

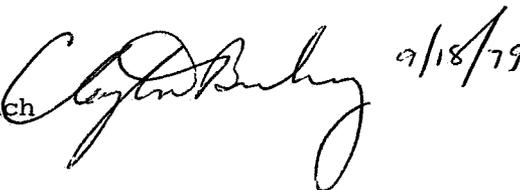
105.0 Conclusions

As per a memo by H.T. Craven (EE Branch) on May 21, 1979, the two avian acute oral studies submitted by Wildlife International Ltd. are acceptable to support all Thiabendazole products. These same two tests (one for bobwhite quail and one for mallard ducks) have been resubmitted within Accession No. 235633. Also the Daphnia acute toxicity study was reviewed and found to be acceptable (see review by R. Matheny, 2/9/79).


Raymond W. Matheny
EE Br. 9/10/79


David Coppage, Section Head
EE Br.

Clayton Bushong, Chief
Ecological Effects Branch
HED

 9/18/79

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060101

Date: May 31, 1979

Memo to the File: EPA 618-IU

Subject: Acute oral studies on Bobwhite quail
and Mallard duck.

From: H. T. Craven

Ecological Effects Branch

To: E. Wilson

Registration Division

The two avian acute oral studies on
Thiabendazole conducted by Wildlife International
Ltd. are acceptable to satisfy registration
requirements. These studies have been reviewed
in light of J. A. Kerman's memo of March 1978.
This memo allows for acceptance of acute
oral studies on mallard and quail when 1)
the birds are 14 days old 2) the study
lasted 8 days and 3) the LD₅₀ was greater
3000 mg/kg or if less than a case by
case evaluation be made.

All Thiabendazole products ~~are~~ may
cite these two studies as the test material
was 98.5% ai.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE

5/10/79

SUBJECT: Registration of Mertect LSP (Thiabendazole)-618 IU

FROM: Arthur D. Riel, Biologist, EEB
Hazard Evaluation Division

TO: Product Manager 21 (Wilson)

Thru: Douglas Urban, Acting Section Head (#1), ESS-EEB
Hazard Evaluation Division

Thru: Clayton Bushong, Chief, EEB
Hazard Evaluation Division

Letter from registrant, Merck and Co. (R.R. Buck) dated 1-17-79 regarding registration of product (Mertect LSP) for wheat seed treatment is hereby acknowledged.

Area of contention involves an avian acute oral LD50 test conducted on 7-28-77 by Robert Fink of Wildlife International for Merck and Co. using technical thiabendazole. Several reviewers placed the test in a supplementary category because present protocol requirements were not followed i.e. use of 16-week-old birds and test duration time of 14 days. Fink used 14 day-old birds during an 8-day test.

A memo by Akerman (3-13-78) accepts studies using 14-day old birds during an interim period of 2-10-76 to 3-13-78. Discussion with Akerman also suggests acceptance of the eight day test duration during this interim.

In this instance, the Environmental Safety Section will therefore accept this protocol and validate the study as core for registration purposes.

Mr. Buck also referred to the avian reproductive studies requested previously and stated that they were submitted on 11-16-78. Due to our backlog, these studies have not been reviewed yet but will be handled through standard procedure when reached.

Arthur D. Riel 5-10-79
Arthur D. Riel, Biologist
Env. Safety Section #1, EEB
Hazard Evaluation Division

Clayton Bushong 5/10/79
Clayton Bushong, Chief
Ecological Effects Branch
Hazard Evaluation Division

Douglas Urban 5/10/79
Douglas Urban, Acting Head
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