

US EPA ARCHIVE DOCUMENT

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REVIEW NO.

SHAUGHNESSEY NO. \_\_\_\_\_

EEB BRANCH REVIEW

MAR 17 1983

DATE: IN 12/20/82 OUT \_\_\_\_\_

FILE OR REG. NO. \_\_\_\_\_ 3125-340

PETITION OR EXP. PERMIT NO. \_\_\_\_\_

DATE OF SUBMISSION \_\_\_\_\_ 11/24/82

DATE RECEIVED BY HED \_\_\_\_\_ 12/17/82

RD REQUESTED COMPLETION DATE \_\_\_\_\_ 3/27/83

EEB ESTIMATED COMPLETION DATE \_\_\_\_\_ 3/20/83

RD ACTION CODE/TYPE OF REVIEW \_\_\_\_\_ 311/Amendment

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

DATA ACCESSION NO (S). \_\_\_\_\_

PRODUCT MANAGER NO. \_\_\_\_\_ H. Jacoby (21)

PRODUCT NAME (S) \_\_\_\_\_ Bayleton 50 WP

COMPANY NAME \_\_\_\_\_ Mobay Chemical Corporation

SUBMISSION PURPOSE \_\_\_\_\_ Proposed Conditional Registration of a

\_\_\_\_\_ variety of crops

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A I.
_____	_____	_____
_____	_____	_____
_____	_____	_____

100.0 Pesticide Use

Bayleton is a fungicide that is presently registered on azaleas, rye grasses, wheat, barley, apples, pears, pineapples, grapes, and pine seedlings.

100.1 Application/Method/Direction

Refer to label

101.1 Chemical and Physical Properties

Refer to previous reviews.

102 Behavior in the Environment (from Leitzke's review 2/7/80)

(Reference: Expanded from L. Turner's (1/12/79) citation of K. Sampson/R. E. Ney - Environmental Fate Review, 8/8/78).

102.1 Soil

In laboratory studies, the half-life of triadimefon was six days in aerobic soil and 15 days in anaerobic soil. Since there was no degradation in sterile soils, microbial action on triadimefon seems a likely route of degradation. In field studies the average half-life was five days, but the half-life of triadimefon plus its primary degrade (KWG-0519) was 225 days. KWG-0519 is considered persistent.

"Aged" soil residues of triadimefon were substantially mobile in sandy clay loam and silty clay soils in column leaching and soil TLC experiments. In the column part, 73% of the original  $^{14}\text{C}$  activity was found below 5 cm. However, relatively low leaching ability of "fresh" triadimefon was noted in a different soil TLC study. Lack of experimental procedures prevented ascribing different results to aging or use of differently labeled parent compounds.

102.2 Water

Triadimefon is stable to hydrolysis at pH 3, 6, and 9 and temperatures of 25 C, 35 C, and 45 C. It will photolyze in water with a half-life of 10-12 hours. Addition of 2% acetone accelerated the half-life to 5.5 hours. 1,2,4-Triazole and  $\text{CO}_2$  were the major photoproducts from triazole- and benzene ring-labeled studies.

In a simulated pond environment, triadimefon has a half-life of 6-8 days in the water and 18-20 days in the silt. The major degradate was again KWG-0519.

103 Toxicological Properties (from Leitzke's review 2/7/80)103.1 Mammal

(Reference: Toxicology Branch memo by J. D. Doherty, 2/15/78).

## Acute Oral LD50

<u>Species</u>	<u>Formulation</u>	<u>LD50 (mg/kg)</u>
Rat (male)	92 % Technical	568 mg/kg
Rat (female)	92 % Technical	363 mg/kg
Mouse (male)	92 % Technical	987 mg/kg
Mouse (female)	92 % Technical	1071 mg/kg
Rabbit	Technical	500 mg/kg
Dog	Technical	500 mg/kg
Rat (male)	50 % WP	812 mg/kg
Rat (female)	50 % WP	1470 mg/kg
Rat (male)	25 % WP	2828 mg/kg
Rat (female)	25 % WP	2828 mg/kg

## Teratology

Three studies (oral in rats, inhalation in rats, and oral in rabbits) showed no indication of embryo toxicity or teratogenesis at 50 mg/kg.

103.2 Fish and Wildlife (Combined from previous EEB reviews)

<u>Species</u>	<u>Test Type</u>	<u>Formulation</u>	<u>Toxicity</u>	<u>Status</u>
Mallard	Acute Oral LD50	Technical	>4,000 mg/kg	Core
Mallard	Dietary LC50	Technical	>10,000 ppm	Core
Bobwhite	Dietary LC50	Technical	>4,640 ppm	Core
Bluegill	96-Hour LC50	Technical	11 ppm	Core
Rainbow Channel Catfish	96-Hour LC50	Technical	14 ppm	Core
<u>Daphnia magna</u>	48-Hour EC50	Technical	1.6 ppm	Core

103.3 Beneficial InvertebratesHoney Bees (Apis mellifera)

Contact and oral LD50 ----- both greater than 25 ug/bee.

Stevenson. 1978. Plant Pathol. 27(1):38-40.

Reviewed by: A. Vaughan, 11/5/79

Reviewer's conclusions: This study is scientifically sound.

104.0

Likelihood of Adverse Effects to Non-Target Organisms.

The Ecological Effects Branch (EEB) previously completed incremental risk assessments of the proposed conditional registration of Bayleton 50% WP for use on apples, grapes, small grains, pears, pine seedlings, and grasses grown for seed. Based upon the available uses provided for a significant increase in exposure, but not in risks to non-target organisms.

The registrant, Mobay, is presently submitting a proposed conditional registration for Bayleton 50% water soluble packet (formulation is contained in a packet which is dropped in the mixing tank) to be applied to the previously cited crops. No incremental risk or increased exposure to non-target organisms is anticipated with this new submission.

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