4-13-93 EEB files

MRID No. ~~250~~ 000-50067

DATA EVALUATION RECORD

1. **CHEMICAL:** Bayleton (Triadimefon).
Shaughnessey Number: Not available.

2. **TEST MATERIAL:** Bay Meb 6447; 1-(4-Chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4 triazol-1-yl)-2-butanone; 93% purity; Bayer batch # 5030047; a white granular material with a distinct odor.

3. **STUDY TYPE:** Avian dietary LC_{50} test.
Species Tested: Mallard duck (Anas platyrhynchos).

4. **CITATION:** Fink, R. 1977. Final report, eight-day dietary LC_{50} - mallard duck. Study performed by Wildlife International Ltd., Easton, Maryland. Laboratory study # 149-106. Submitted by Chemagro Agricultural Division, Mobay Chemical Corporation (Address not given). MRID No. ~~250~~ 000-50067.

5. **REVIEWED BY:**

Michael L. Whitten, M.S.
Wildlife Toxicologist
KBN Engineering and
Applied Sciences, Inc.

Signature: Michael L. Whitten
Date: 2-14-91

Dennis Kelso 3-11-93

6. **APPROVED BY:**

Pim Kosalwat, Ph.D.
Senior Scientist
KBN Engineering and
Applied Sciences, Inc.

Signature: P. Kosalwat
Date: 2/14/91

Henry T. Craven, M.S.
Supervisor, EEB/HED
USEPA

Signature: Henry T. Craven
Date: 4/13/93

7. **CONCLUSIONS:** The study is scientifically sound but does not fulfill the requirements for an avian dietary LC_{50} test. Under the conditions of this study, and based upon nominal concentrations, the dietary LC_{50} of Bayleton was greater than 10,000 ppm, the highest concentration tested. This value classifies Bayleton as practically non-toxic to 14-day old mallard ducklings. The NOEC could not be determined, due to reductions in body weight gain and food consumption at all treatment concentrations.

8. **RECOMMENDATIONS:** N/A

9. **BACKGROUND:**

10. **DISCUSSION OF INDIVIDUAL TESTS:** N/A.

11. **MATERIALS AND METHODS:**

A. **Test Animals:** The birds used in the study were 14-day old mallard ducklings (Anas platyrhynchos) hatched from eggs obtained from Wildlife International's own production flock.

B. **Test System:** The pen facilities in which the birds were housed during the study, and the photoperiod to which the birds were exposed, were not described. The brooder temperature was maintained at 99.0°F.

C. **Dosage:** 8-day dietary LC_{50} test. Nominal concentrations were 464, 1000, 2150, 4640, and 10,000 parts per million (ppm). "For the purposes of diet preparation, the experimental material was assumed to be 100 percent active material."

D. **Design:** Groups of ten birds were randomly assigned, without regard to sex, to each of five control groups, five laboratory standard (dieldrin) groups, and five treatment groups. All birds were fed a commercial game bird starter ration. Food and water were supplied ad libitum throughout the test.

The test substance and dieldrin were dissolved in corn oil and added to the basal feed. The concentration of the solutions in the treatment and dieldrin diets was 2% (by weight). The birds were fed the appropriate dietary concentrations for five days, and then given untreated food for three days. The control birds received the basal diet throughout the study.

Birds were weighed by pen at initiation and termination of the study. Food consumption was recorded by pen during the five-day exposure period. Mortality and symptoms of toxicity were recorded daily throughout the study.

E. **Statistics:** Mortality in the dieldrin group was analyzed by the probit method of Litchfield and Wilcoxon. Due to the absence of mortality in all treatment groups, the LC_{50} was not calculated.

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12. **REPORTED RESULTS:** There was no mortality in the control groups, and the birds appeared normal throughout the study.

There was no mortality in any of the Bayleton treatment groups. The birds in the Bayleton treatment groups showed no symptoms of toxicity during the test period. There was a reduction in food consumption and body weight gain at 10,000 ppm (Table 1, attached).

The report provided results on mortality and symptoms of toxicity in the dieldrin group.

13. **STUDY AUTHOR'S CONCLUSIONS/QUALITY ASSURANCE MEASURES:** The author presented no conclusions, but included the following statement as a summary: "The acute LC_{50} of Bayleton Technical in the Mallard duck is estimated to be greater than 10,000 ppm."

The report included no statements regarding quality assurance. One quality assurance measure was the inclusion of a laboratory standard treatment, commonly known as a positive, or reference control.

14. **REVIEWER'S DISCUSSION AND INTERPRETATION OF STUDY RESULTS:**

A. **Test Procedure:** This study was conducted in 1977, before the current SEP, ASTM, and Subdivision E Guidelines were published. However, the test procedures were in accordance with current guidelines except for the following deviations:

The birds were 14 days of age at initiation of the study; the recommended age is 5 to 10 days.

The average ambient relative humidity was not reported.

A full description of the test facilities (construction material, dimensions) was not reported.

The photoperiod was not reported.

The concentration of test substance in the diet was not confirmed by chemical analysis. This is recommended, but not required.

The vehicle (corn oil) was not added to untreated diets. The control birds received only the basal diet throughout the study.

considered in any risk assessment of this chemical. Altered growth or development of birds caused by exposure to these concentrations in the wild might result in reduced survival rates.

The study is scientifically sound, but does not meet the requirements for an avian dietary LC_{50} test, since the birds were older (and potentially more resistant to the test chemical) than the recommended age. Younger birds might have responded differently, particularly in view of the reduced body weight gain and food consumption seen at all treatment levels.

D. **Adequacy of the Study:**

(1) **Classification:** Supplemental.

(2) **Rationale:** The birds were older than the recommended age.

(3) **Repairability:** No.

15. **COMPLETION OF ONE-LINER:** Yes; February 6, 1991.

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RIN 5710-93

TRIADIMEFON EFB REVIEW

Page 5 is not included in this copy.

Pages _____ through _____ are not included.

The material not included contains the following type of information:

____ Identity of product inert ingredients.

____ Identity of product impurities.

____ Description of the product manufacturing process.

____ Description of quality control procedures.

____ Identity of the source of product ingredients.

____ Sales or other commercial/financial information.

____ A draft product label.

____ The product confidential statement of formula.

____ Information about a pending registration action.

✓ FIFRA registration data.

____ The document is a duplicate of page(s) _____.

____ The document is not responsive to the request.

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.

Shaughnessy No. Not available Chemical Name Bayleton (Triadimefon) Chemical Class ____ Page 1 of 1

Study/Species/Lab/ Accession	Chemical % a.i.	Results	Reviewer/ Date	Validation Status
14-Day Single Dose Oral LD_{50} Species ____ Lab Acc.		LD50 = mg/kg (95% C.L.) Contr. Mort.(%)= Slope= # Animals/Level= Age(Days)= Sex = 14-Day Dose Level mg/kg/(% Mortality) ( ), ( ), ( ), ( ), ( ) Comments:		
14-Day Single Dose Oral LD_{50} Species ____ Lab Acc.		LD50 = mg/kg. (95% C.L.) Contr. Mort.(%)= Slope= # Animals/Level= Age(Days)= Sex = 14-Day Dose Level mg/kg/(% Mortality) ( ), ( ), ( ), ( ), ( ) Comments:		
8-Day Dietary LC_{50} Species Mallard (Anas platyrhynchos) Lab Wildlife International Acc. MRID #~~250~~50067	93%	LC50 > 10,000 ppm (95% C.L. N/A) Contr. Mort.(%) = 0 Slope= N/A # Animals/Level= 10 Age(Days)= 14 Sex = unknown *8-Day Dose Level ppm/(%Mortality) 464 (0), 1,000 (0), 2150 (0), 4640 (0), 10,000 (0) *Nominal values Comments: Reduced body weight gain + food consumption at all concentrations	Supplemental M. Whitten 2-6-91	
8-Day Dietary LC_{50} Species ____ Lab Acc.		LC50 = ppm (95% C.L.) Contr. Mort.(%)= Slope= # Animals/Level= Age(Days)= Sex = 8-Day Dose Level ppm/(%Mortality) ( ), ( ), ( ), ( ), ( ) Comments:		
48-Hour LC_{50} Species ____ Lab Acc.		LC50 = pp__ (95% C.L.) Contr. Mort.(%)= Sol. Contr. Mort.(%)= Slope= # Animals/Level= Temperature = 48-Hour Dose Level pp /(%Mortality) ( ), ( ), ( ), ( ), ( ) Comments:		
96-Hour LC_{50} Species ____ Lab Acc.		LC50 = pp__ (95% C.L.) Con. Mor(%)= Sol. Con. Mor.(%)= Slope= # Animals/Level= Temp.= 96-Hour Dose Level pp /(%Mortality) ( ), ( ), ( ), ( ), ( ) Comments:		
96-Hour LC_{50} Species ____ Lab Acc.		LC50 = pp__ (95% C.L.) Con. Mort.(%)= Sol. Con. Mort.(%)= Slope= # Animals/Level= Temp.= 96-Hour Dose Level pp /(%Mortality) ( ), ( ), ( ), ( ), ( ) Comments:		

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