

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD

1. Chemical: Prometon
2. Test Material:
2,4-bis[isoproylamino]-6-methoxy-s-triazine 98.5% a.i.
3. Study Type: A dietary LC₅₀ study with the Mallard
4. Study ID: MRID NO. 416091-06
Long, Ronald (1990) Prometon: A dietary LC₅₀ study with the Mallard. Unpublished study prepared by Wildlife International Ltd., 305 Commerce Drive, Easton, MD 21601.
5. Reviewed by: Cynthia Moulton
Biologist *Cynthia Moulton*
EEB/EFED 2.27.91
6. Approved by: Norman Cook *Norman J. Cook*
Head Section II 2.28.91
EEB/EFED
7. Conclusion: This study follows EPA guideline requirements and is classified as core. The dietary LC₅₀ value for the mallard duck exposed to Prometon 98.5% a.i. was determined to be greater than 5620 ppm a.i., the highest dosage tested. The no observed effect concentration was <562 ppm a.i., the lowest dosage tested, due to a dose responsive reduction in weight gain.
8. Recommendations: N/A
9. Background:
A dietary LC₅₀ study is required to support reregistration of Prometon. Review of this study is part of phase IV, response of data submission, of the reregistration process.
10. Discussion of Individual Tests: N/A.
11. Materials and Methods:
 - a. Test Animals - the mallard duck (Anas platyrhynchos), obtained from Whistling Wings, Box 1, 113 Washington Street, Hanover, Illinois, 61041. Birds were acclimated for 9 days, were 10 days old at the initiation of the test, and appeared to be in good health. All birds were from the same hatch, pen-reared and phenotypically indistinguishable from wild birds.

b. Test System - The mallards were maintained on a diet of Wildlife International game bird ration. Water and feed were provided ad libitum during the acclimation and during the test.

c. Dosing - Groups of ten ducklings were assigned to each of the treatment and control group; levels were 562 ppm, 1000 ppm, 1780 ppm, 3160 ppm, and 5620 ppm. The test diets were prepared by mixing the test substance into the diet with 2% corn oil.

d. Design - Ten birds in each of the controls and treatment levels were used. The ducklings were weighed initially and on day 5 of the test. Food consumption of the birds was estimated by group from days 0-5 and days 6-8.

e. Statistics - The study was not conducive to calculating an LC50 value. The LC50 value was estimated by visually inspecting the mortality data.

12. Reported Results:

There were no mortalities at any of the test concentrations and no observed signs of toxicity. There was a dose responsive effect on mallard body weights from Day 0 to Day 5, with a reduction in weight gain occurring at 562, 1000, and 1780 ppm a.i. test concentrations and a loss of body weight occurring at the 3160 and 5620 ppm a.i. test concentrations when compared to controls. A reduction in feed consumption was observed at the 1780, 3160, and 5620 ppm a.i. test concentrations during the exposure period.

13. Study Authors Conclusion:

"In conclusion, the dietary LC₅₀ value for mallards exposed to Prometon was determined to be greater than 5620 ppm a.i., the highest dosage tested. "

14. Reviewers Discussion and Interpretation of the Study:

a. Test Procedures - The study appeared to follow EPA guideline requirements.

b. Statistical Analysis - There were no treatment related mortalities, the authors LC₅₀ value was based on visual inspection of the mortality data.

c. Discussion/ Results - Based on these data, it appears that the LC₅₀ of Prometon 98.5% a.i. for the mallard duck is greater than 5620 ppm nominal concentration. This indicates that Prometon is practically nontoxic to waterfowl species on a dietary basis. The no observed effect concentration was <562 ppm a.i., the lowest dosage tested, due to a dose responsive reduction in weight gain.

d. Adequacy of Study

1) Classification: Core

2) Rationale: The study follows EPA guidelines protocol.

3) Repairability: N/A

15. Completion of One-Liner:

TABLE 3

BODY WEIGHT AND ESTIMATED FEED CONSUMPTION OF CONTROL MALLARDS

| Concentration ppm | Average Body Weight (Grams) | | | | | | Feed Consumption Grams Per Bird Per Day | |
|----------------------|-----------------------------|--------|-------|-------------|-------|-----------------|--|-------------|
| | Exposure | | | Observation | | Total Change | Exposure | Observation |
| | Day 0 | Change | Day 5 | Change | Day 8 | | Days 0-5 | Days 6-8 |
| 0 | 162 | 153 | 315 | 100 | 415 | 253 | 73 | 100 |
| 0 | 162 | 141 | 303 | 115 | 418 | 256 | 64 | 103 |
| 0 | 166 | 94 | 260 | 175 | 435 | 269 | 66 | 146 |

TABLE 4

BODY WEIGHT AND ESTIMATED FEED CONSUMPTION OF MALLARDS
EXPOSED TO PROMETON FOR FIVE DAYS

| Concentration ppm a.i. | Average Body Weight (Grams) | | | | | | Feed Consumption Grams Per Bird Per Day | |
|---------------------------|-----------------------------|--------|-------|-------------|-------|-----------------|--|-------------|
| | Exposure | | | Observation | | Total Change | Exposure | Observation |
| | Day 0 | Change | Day 5 | Change | Day 8 | | Days 0-5 | Days 6-8 |
| 562 | 169 | 110 | 279 | 119 | 398 | 229 | 59 | 116 |
| 1000 | 175 | 104 | 279 | 130 | 409 | 234 | 60 | 125 |
| 1780 | 165 | 66 | 231 | 136 | 367 | 202 | 41 | 102 |
| 3160 | 172 | -6 | 166 | 118 | 284 | 112 | 28 | 101 |
| 1520 | 176 | -21 | 155 | 128 | 283 | 107 | 17 | 94 |

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