

US EPA ARCHIVE DOCUMENT

3-19-82

CASE GS0043 METHAMIDOPHOS PM 04/16/81

CHEM 101201 Methamidophos (O,S-dimethyl phosphoram

BRANCH EEB DISC 40 TOPIC 05050542

FORMULATION 00 - ACTIVE INGREDIENT

FICHE/MASTER ID 00041313 CONTENT CAT 01

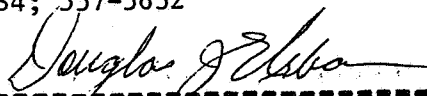
Nelson, D.L.; Burke, M.A.; Burnett, R.M. (1979) Acute Oral Toxicity of Monitor(R) Technical to Bobwhite Quail; Report No. 67993, (Unpublished study received Mar 19, 1980 under 3125-280; submitted by Mobay Chemical Corp., Kansas City, Mo.; CDL:242410-E)

SUBST. CLASS = S.

DIRECT RVW TIME = 1 hour (MH) START-DATE 2/1/82 END DATE 2/1/82

REVIEWED BY: Douglas J. Urban  
TITLE: Fish and Wildlife Biologist  
ORG: Ecological Effects Branch, HED, OPP  
LOC/TEL: CS4; 557-5632

SIGNATURE:



DATE:

3/19/82

APPROVED BY:

TITLE:  
ORG:  
LOC/TEL:

SIGNATURE:

DATE:

Reviewers Conclusion:

A. Validation Category: Core

B. Discussion: This study is scientifically sound and with LD50's of 10.1 mg/kg and 11.0 mg/kg for males and females, respectively, methamidophos is highly toxic to bobwhite quail. The study does fulfill the requirement for an LD50 to an upland game bird.

DATA EVALUATION SHEET

1. CHEMICAL: Monitor
2. FORMULATION: O,S-dimethyl phosphoramidothioate ... 75%  
Shaughnessy Number: 101201
3. CITATION: Nelson, D.L. 1979. Acute Oral Toxicity of Monitor<sup>®</sup> Technical to Bobwhite Quail. Received 12/10/80. An unpublished report prepared by Mobay Chemical Corporation of Chevron Chemical Company. Report No. 67993
4. REVIEWED BY: Daniel Rieder  
Wildlife Biologist  
EEB/HED
5. DATE REVIEWED: 1/8/81
6. TEST TYPE: Avian acute oral
  - A. Test Species: Bobwhite Quail
  - B. Test Material: Monitor Technical (75% a.i.)
7. REPORTED RESULTS:

Male and Female birds were tested separately.  
The LD50 for male bobwhite quail was 10.1 (7.9-13.1) mg/kg.  
The LD50 for Female bobwhite quail was 11.0 (8.5-14) mg/kg.
8. REVIEWERS CONCLUSION:
  - A. Validation Category: Core
  - B. Discussion: The test was scientifically conducted and meets guideline requirements. It shows that monitor is highly toxic to bobwhite quail. The technical grade of monitor used in the test was 75% active ingredient.

## REPORTED METHODS AND RESULTS

### A. Test Procedure

Twenty 22-week old bobwhite quail were tested at each of 5 test levels (2.2, 4.7, 10.1, 21.8, and 47.1 mg/kg) and a control. The twenty at each level were divided into two groups; ten males and ten females. The procedure was described in excellent detail. The birds weight and food consumption were reported for the 14-day observation period following dosage. The tested material, Monitor Technical was 75% active ingredient.

### B. Statistical Analysis

Mortality data were analyzed by the method of Carrol S. Weil, Biometrics, Vol. 8 No. 3, 1952.

### C. Results

The results were reported seperately for the two test groups. The LD50 and 95% confidence limits for male bobwhite quail dosed with Monitor was 10.1 (7.9-13.1) mg/kg. For female bobwhite quail it was 11.0 (8.5-14.1) mg/kg. The surviving birds at the 4.7 and 10.1 level lost weight and ate less than the control birds for the first 4 days or so.

## REVIEWERS EVALUATION

### A. Test Procedure

The reported protocol was acceptable. However, it should be noted that Monitor technical is only 75% active ingredient.

### B. Statistics

An independent statistical analysis was performed using the Thompson-Weil method. The results were essentially the same as those reported.

### C. Discussion

The tested material is highly toxic to bobwhite quail. This test shows that a dose of monitor will cause a reduction in food consumption. This suggests that monitor makes the birds too sick to eat for sometime after dosage. In this case monitor (technical) is 75% active ingredient.

### D. Conclusion

Category: Core

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