057801

Core for Formulated Product (Knox Out)

Duck Dietary 7-17-80

DATA EVALUATION RECORD

1. CHEMICAL: Diazinon

2. FORMULATION: Knox Out 2 FM (23% Microencapsulated)

3. CITATION: Beavers, J.B. 1978c. Eight-day dietary LC50-Mallard duck, Knox Out 2 FM, Final Report, Proj. No. 110-122; prepared by Wildlife Intl. Ltd.; submitted by Pennwalt Corp. (Acc. No. 240993).

4. REVIEWED BY: John S. Leitzke
Ecologist, Section #3
Ecological Effects Branch

5. DATE REVIEWED: July 17, 1980

6. TEST TYPE: Avian 5(+3)-day Dietary LC50

Test Species: Mallards (Anas platyrhynchos)

7. REPORTED RESULTS:

LC50 = 649 (464-908) ppm of test material (23% diazinon)

8. REVIEWER'S CONCLUSIONS:

In terms of active ingredient (AI), the LC50 equals 149 (~~59.5-106~~ 107-209) ppm AI, indicating a high toxicity to avian wildlife such as waterfowl in their diet. The study is scientifically sound and is Acceptable in meeting the Guidelines minimum data requirement for an avian 5(+3)-day dietary LC50 using a waterfowl on the formulation, Knox Out 2 FM.

✓ Bjm

71-2

Materials/Methods

The test material is the formulated product Knox Out 2 FM (23% diazinon) since this test using the formulation is required for registration.

Mallard ducklings at 14 days of age were 10 to a group and exposed to a 14L: 10D lighting regime. Examination of each groups average initial body weights indicated a random, non-heterogeneous assignment of birds to test and control groups. Test birds were exposed to treated feed for 5 days followed by 3 days observation on clean feed.

Statistical Analysis

The reported dose-response data were analyzed on EEB's TI-59 calculator using the Finney Probit Program (attached).

Results/Discussion

There was no mortality in any of the 5 control groups. Decreases in body weight gain and feed consumption were noted all test groups the lowest being 23 ppm AI. Depression, reduced reaction to external stimuli and loss of coordination were some of the major sumptoms noted. Not all deaths occurred in the first several days; several occurred in the last part of the test.

Reviewer's Evaluation

A. Test Procedure

The test procedure generally complies with recommended protocol.

B. Statistical Analysis

The Chi-square statistic indicated a homogeneous dose-response relationship within the test groups.

C. Results/Discussion

The reported LC50 is less than the recalculated value and will be used in all hazard evaluations,

D. Validation

Core

Diazinon - Knox Cut

Mall - LCx

Wildl Intl 73

100.	
0.	
10.	
178.	
2.	
10.	
316.	
2.	
10.	
562.	
3.	
10.	
1000.	
6.	
10.	
1780.	
9.	
10.	
3160.	
10.	
10.	

2.497	M
-2.032	YINT
2.515	LW M
3.836	CHI²
655.498	LD50
464.597	LDCL
924.839	UPCL
200.952	LD10
115.219	LDCL
350.480	UPCL
2138.208	LD90
1199.116	LDCL
3812.754	UPCL

df = 5

NS