

US EPA ARCHIVE DOCUMENT

FORMULATION:			IA	IB	T	FW	EC	R			
% a.i.	SC#	CHEMICAL NAME	Validator:		Date:						
98-99%		Diphacinone	Larry Turner		8/21/78						
		DER #1	Test Type:								
			Avian acute oral LD50 Mallard duck								
			Test ID # ES-C1								

CITATION: Fink, Robert. 1976. Acute oral LD₅₀ - mallard duck; technical diphacinone, final report. 9 p. Study conducted by Truslow Farms. Submitted by Velsicol Corporation; 576-EUP-35, Acc. # 237422, 7/12/78.

RESULTS: Mallard duck acute oral LD₅₀ = 3158 mg/kg (95% c.i. 1605-6211 mg/kg). No mortality occurred at the two lowest levels of 215 and 464 mg/kg; 60% mortality occurred at the highest level of 4640 mg/kg. Toxic symptoms were depression and reduced reaction to external stimuli, consumption, when compared to controls, was 25% reduced at 215 mg/kg and was 37-47% reduced at all higher levels. Weight gain may also have been lower in treated birds, but this could not be accurately assessed because of the disparity in weights between control and treatment birds.

(Sound and movement) at the 1000, 2150, and 4640 mg/kg levels. Food

VALIDATION CATEGORY: Core

CATEGORY RATIONALE: Internal EEEB memo of 3/13/78

ABSTRACT: Mallard ducks were given a single dose by intubation, of diphacinone in concentrations of 0 (control), 215, 464, 1000, 2150, and 4640 mg/kg. Procedures generally followed the proposed guidelines except as noted below:

1. The percent a.i. was not reported.
2. Birds were only 14 days old.
3. Housing conditions were incompletely reported.
4. Doses were much farther apart than recommended.
5. Post-dosage observation period was only 8 days.
6. No mention was made that birds were fasted 15 hours before dosing.

see BW Quail study - same? *when non fast death*

The LC₅₀ was determined by the method of Litchfield-Wilcoxon. When checked with Finney probit, a similar LC₅₀ value of 3098 mg/kg was obtained with an acceptable chi square value.

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Bobwhite dietary LD50
 Diphacinone technical
 Finney probit

L. Turner
 8/18/78

464.
 0.
 10.
 1000.
 1.
 10.

2150.
 2.
 10.

4640.
 4.
 10.

10000.
 10.
 10.

2.986 M
 -5.720 YINT
 2.162 LW M
 3.783 CHIZ

3893.588 LD50
 2694.894 LDCL
 5625.463 UPCL

1448.677 LD10
 824.313 LDCL
 2545.958 UPCL

10464.736 LD90
 5522.119 LDCL
 19831.282 UPCL

Mallard oral LD50
 Diphacinone tech
 Finney probit

L. Turner
 8/18/78

215.
 0.
 10.
 464.
 0.
 10.

1000.
 2.
 10.

2150.
 4.
 10.

4640.
 6.
 10.

2.219 M
 -2.747 YINT
 2.823 LW M
 0.901 CHIZ

3097.816 LD50
 1783.298 LDCL
 5381.300 UPCL

819.101 LD10
 411.380 LDCL
 1630.918 UPCL

11715.840 LD90
 3659.389 LDCL
 37509.240 UPCL