

US EPA ARCHIVE DOCUMENT

Validation Sheet

Formulation: Assumed to be 100% a.i..  
 Chemical Name: San 326 10 G  
 Validator: Ray Matheny  
 Date: 3/12/79  
 Test Type: Avian Subacute Dietary LC<sub>50</sub>  
 Test I.D. #: Project No. 131-107  
 Citation: Fink, R. and J. Beavers. 1978. Eight-Day Dietary LC<sub>50</sub>  
 Mallard Duck - San 326 - Final Report - Submitted to  
 to Sandoz, Inc., Wildlife International Ltd. (page  
 0034 within Accession No. 097840).

Validation Category: Invalid

Result:	Species	Test LC <sub>50</sub> *	Confidence Limits
	Mallard duck	greater than 4.58 ppm	(N A)
	*An LC <sub>50</sub> of 671 ppm ( <u>395-6994</u> ppm) was derived using the Probit method		

Validation Category Rationale:

None of the test concentrations resulted in more than 40% of the organisms being killed. The applicant shows a value of greater than 4.58 ppm with no calculated confidence limits.

Category Repairability/Rationale:

Cannot be upgraded to core because of erratic response at higher concentrations.

Abstract:

## Abstract

Fourteen day old mallard ducks ( 6 pens with 10 birds each) were placed under test @ 31.6, 56.2, 100, 178, 316 and 562 ppm. They were exposed to the diet concentration in corn oil for five days. There were no mortalities among the control group. No mortalities occurred at the 31.6 and 100 ppm level. Lethargy became apparent among those birds at the 178 ppm levels on Day 3. At the higher levels, toxic symptoms included lethargy, followed by depression, reduced reaction to external stimuli, wing droop, a ruffled appearance, loss of coordination and lower limb weakness. At the 562 ppm level was a marked reduction in food consumption ( 9 grams/day vs. 80 grams for control birds). Upon necropsy it was observed that most birds had totally empty crops, proventriculosis and gizzards. No overt lesions were noted upon necropsy of surviving birds.

By Day 5 one bird had died at each of the three highest levels (178, 316 and 562). However, by Day 6 there were 1, 4 and 3 birds dead, respectively. With a higher number dead at 562 ppm than at 316 ppm (4 vs. 3).

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San 326I- 3/12/79

Mallard duck.

LC<sub>50</sub>

9000 data 6  
9001 data 562.0,316.0,178.0,100.0,56.2,31.6  
9002 data 10,10,10,10,10,10  
9003 data 3,4,1,0,0,0  
run

79/03/12. 13.53.43.  
BASIC PROGRAM A78LC50

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*****
GNC.      NUMBER      NUMBER      PERCENT      BINOMIAL
          EXPOSED     DEAD        DEAD         PROB.(PERCENT)
562       10          3          30.          17.1875
316       10          4          40.          37.6653
178       10          1          10.          1.07422
100       10          0          0            9.76563E-2
56.2     10          0          0            9.76563E-2
31.6     10          0          0            9.76563E-2
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THIS DATA SET DOES NOT MEET THE CRITERIA ESTABLISHED BY THE COMMITTEE ON METHODS FOR TOXICITY TESTS WITH AQUATIC ORGANISMS BECAUSE NO PERCENT DEAD IS GREATER THAN 65 PERCENT.

NEITHER THE BINOMIAL TEST NOR THE MOVING AVERAGE METHOD CAN GIVE ANY RESULTS FOR THIS DATA SET. EITHER THE HIGHEST CONCENTRATION KILLED LESS THAN 50 PERCENT OR THE LOWEST KILLED MORE THAN 50. IF THE PROBIT SLOPE IS NEGATIVE, ENTER DATA AGAIN USING NUMBER ALIVE INSTEAD OF NUMBER DEAD.

-----RESULTS CALCULATED USING THE PROBIT METHOD  
ITERATIONS 6 H GOODNESS OF FIT PROBABILITY  
5 .52033 1 .599093

SLOPE = 2.27104  
95 PERCENT CONFIDENCE LIMITS = .632849 AND 3.90923

LC50 = 671.547  
95 PERCENT CONFIDENCE LIMITS = 395.65 AND 6994.75

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H6