113601

3-12-79

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_{50}

Test I.D. #: Project No. 131-107

Citation: Fink, R. and J. Beavers. 1978. Eight-Day Dietary LC_{50} 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_{50}*	Confidence Limits
	Mallard duck	greater than 4.58 ppm	(N A)

*An LC_{50} of 671 ppm (395-6994 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 caluclated 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. They 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, proventriculous 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).

San 326I - 3/12/79

Mallard duck

LC_{50}

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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


**********************************************************************
CNC.            NUMBER          NUMBER          PERCENT         BINOMIAL
                 EXPOSED         DEAD            DEAD            PROB.(PERCENT)
562              10              3               30.             17.1875
 316              10              4               40.              37.6953
 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

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      G               H               GOODNESS OF FIT PROBABILITY
 5               .52033          1               .599093

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

LC50   =         421.547
95 PERCENT CONFIDENCE LIMITS =   295.65    AND    599.75
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