

US EPA ARCHIVE DOCUMENT

113601

3-13-79

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Nto

Validation Sheet

Formulation: Assumed to be 100% a.i.
 Chemical Name: San 326 10 G
 Validator: Ray Matheny
 Date: 3/13/79
 Test Type: Aquatic Invertebrate Acute Toxicity
 Test I.D. #: LICES Proj. No. 11506-16-04
 Citation: Morrissey, A., et. al. 1978. The Acute Toxicity of San 326, Lot. No: 7801 To The Water Flea Daphnia magna Straus. Prepared for Sandoz, Inc., by Union Carbide Environmental Services. (pg. 0097 within Accession No. 097840)

Validation Category: Core

Result:	Species	Test 48-hr. LC ₅₀	Confidence Limits
	<u>Daphnia magna</u>	0.70 ug/l*	(0.57-0.85 ug/l)

*Using the Probit Method, a verification of the test resulted in an LC₅₀ of 0.68 ug/l (0.56-0.83 ug/l)

Validation Category Rationale:

Satisfies Core data requirements

Category Repairability/Rationale:

None necessary

Abstract:

Six concentrations (1.3, 1.0, 0.56, 0.32, 0.18 and 0.1 ~~ug/l~~)

ug/l

72-2

1
3

cont.

of San 326 resulted in the following Mortalities: 0, 0, 3, 6, 14 and 20, respectively. Twenty hour old Daphnia. was used. Four replicates were run for each of the six concentrations, with temperatures kept at $21^{\circ}\text{C} \pm 2^{\circ}\text{C}$. Total hardness as CaCO_3 was 210 mg/l. Dissolved O_2 kept at 8.8 mg/l. and the pH @ 8.38 initially. Vs. 8.28 upon termination.

2

9001 data 1.80,1.00,0.56,0.32,0.18,0.10
 9002 data 20,20,20,20,20,20
 9003 data 20,14,6,3,0,0
 run

San 326 I 3/12/79
Daphnia magna
 Acute Toxicity

79/03/12. 13.46.53.
 BASIC PROGRAM A78LC50

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*****
ONC.          NUMBER      NUMBER      PERCENT      BINOMIAL
              EXPOSED     DEAD        DEAD        PROB.(PERCENT)
1.8           20         20         100         9.53674E-5
1             20         14         70.         5.76591
.56           20         6          30.         5.76591
.32           20         3          15.         .128841
.18           20         0           0           9.53674E-5
.1            20         0           0           9.53674E-5
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THE BINOMIAL TEST SHOWS THAT .32 AND 1.8 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.8711 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS .748331

-----RESULTS CALCULATED USING THE MOVING AVERAGE METHOD
 SPAN G LC50 95 PERCENT CONFIDENCE LIMITS
 4 6 5.18085E-2 .660447 .555368 .799869

-----RESULTS CALCULATED USING THE PROBIT METHOD
 ITERATIONS G H GOODNESS OF FIT PROBABILITY
 6 6 1 .603985

SLOPE = 4.17904
 95 PERCENT CONFIDENCE LIMITS = 2.84914 AND 5.50893

LC50 = .681521
 95 PERCENT CONFIDENCE LIMITS = .562497 AND .831415
