DATA EVALUATION RECORD

1. Chemical: Neurolidol SN: 128911

2. Test Material: 97% ai Technical

3. Study/Action Type: Acute avian single-dose LD_{50}

4. Study ID: Fletcher, D.W. Acute Oral LD_{50} Study in Mallard Duck with Neurolidol Technical (1986) Bio Life Associates, BLAL No. 86DD36. Study Sponsor: Fermone Chemical Co. Study Location: Neillsville, WI. EPA Accession No. 264426.

5. Reviewed by: Robert W. Pilsucki
Microbiologist
EEB/HED
Signature: Robert W. Pilsucki
Date: 1/8/87

6. Approved by: Raymond W. Matheny
Head, Section 1
EEB/HED
Signature: Raymond W. Matheny
Date: 1/8/87

7. Conclusions:

This study is classified as core. The LD_{50} for Mallard ducks is greater than 2150 mg/kg.

8. Recommendations:

None.

9. Background: N/A.

10. Discussion of individual Studies or Tests: N/A.

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11. Materials and Methods:

Species: Mallard duck

Ages: 21 weeks

Source and pretest history: Whistling Wings, Inc.
Hanover, IL

The birds selected for testing had been observed for 27 days while being acclimated to laboratory conditions. The birds were examined for suitability for testing.

Selection of test birds:

The test birds were leg-banded and then were randomly distributed into groups of 10 birds, balanced for sex.

Dosing:

The dosing was performed using a disposable syringe.

Vehicle:

The vehicle used was table-grade corn oil.

Housing conditions:

Temperature:	47 °F - 94 °F
Humidity:	65 - 88%
Photoperiod:	8 hr light/16 hr dark
Pen size:	121.9 cm x 121.9 cm x 121.9 cm

Controls:

A vehicle control group was performed concurrently with the test groups.

Duration of Study: 21 days.

Food Withholding: 21 hours.

Food consumption and body weights:

See attached tables.

Observations:

The birds were observed daily for adverse clinical signs.

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Necropsies:

Two male and two female birds from each group were necropsied at the end of the study.

12. Reported Results:

Neurolidol: Mallard Duck

Concentration (mg/kg)	Number Exposed	Number Dead	Percent Mortality
0	10	0	0
1470	10	0	0
2150	10	0	0

The author reported that no behavioral changes or toxic signs were observed. Gross pathological examination revealed no abnormalities.

13. Study Author's Conclusions/Quality Assurance Measures:

The author drew no conclusions about the study.

The author stated that the study was reviewed by BLAL's Quality Assurance Unit.

14. Reviewer's Discussion and Interpretation of Study:

a. Test Procedure: This study follows the procedures outlined in EPA's Pesticide Assessment Guidelines: Subdivision E.

b. Statistical Analysis: There was no statistical analysis performed on the mortality data. A test of significance (student t test) on the weight gain/loss between the control and the group receiving the high dose showed that there was a significant difference ($p < .05$) in weight gain/loss. The control group gained an average of 35 g/bird while the high-dose group lost an average of 28 grams over the test period.

c. Discussion/Results: Although there were no mortalities or clinical/pathological signs, the group of birds treated with neurolidol at 2150 mg/kg did show a significant weight gain/loss when compared with controls.

This anorexia and loss of weight is clearly a sign of toxicity when birds are dosed with high levels of neurolidol. The food consumption of the high-dose birds

was equal to the low-dose birds who showed an increase in weight equivalent to the controls. The significance of this weight loss, in the absence of other toxicity signs is difficult to determine.

d. Adequacy of the Study:

1. Category: Core.

2. Rationale: This study followed the procedure recommended in EPA's Pesticide Assessment Guidelines: Subdivision E.

3. Repairability: N/A.

STUDENT'S T-TEST (two-tailed)

Enter the name of the DATAFILE you wish to analyze: NEURO
(Press RETURN if you wish to skip directly to T evaluation)

What are the SAMPLE NUMBERS of the 2 variables you want to compare?

		1 ®CONTROL'	2 ®HIGH'
Means	=	137.9	74.7*
Variances	=	2329.435	1208.011

Are these INDEPENDENT or PAIRED samples? (I or P) I

The MEANS of these 2 samples are significantly different.

The confidence limits on the DIFFERENCE between the means of these samples can be calculated as:

$$63.2 +/- T(18) * 3$$

Do you want another T-TEST using this datafile?

*Data values had 10 added

Control Mean = 34.9

High Dose Mean = 28.33