4-13-82
Duplicate

DATA EVALUATION

1. CHEMICAL: 3-phenoxybenzoic acid degradate

2. FORMULATION: 73 % active ingredient

3. CITATION: Edwards, P.J., S.M. Brown, and H. Swaine (1980) 3-phenoxybenzoic acid: Toxicity to first instar Daphnia magna. Unpublished report by the Plant Protection Division, submitted 12/28/81 by ICI Americas Inc., Wilmington, Delaware

EPA Accession No. 070562

4. REVIEWED BY: Thomas B. Johnston
Biologist, EEB/HED

5. REVIEW DATE: April 13, 1982

6. TEST TYPE: 48-hr static acute EC_{50}

7. REPORTED RESULTS: The reported acute 48-hr EC_{50} of 3-phenoxybenzoic acid for Daphnia magna is 111 ppm, with 95% confidence limits of 82 and 147 ppm.

8. REVIEWER'S CONCLUSIONS: This study is scientifically sound, and fulfills USEPA guideline requirements for an acute toxicity test on a major degradation product using an aquatic invertebrate. With a 48-hr acute EC_{50} of 111 ppm, 3-phenoxybenzoic acid is practically non-toxic to aquatic invertebrates.

MATERIALS/METHODS

Methods used generally followed USEPA guidelines. Mean measured concentrations were used to calculate EC_{50}s because of precipitation at the higher concentrations. Tests were run at 17°C. Five tests were run in all, but tests I and II were eliminated because of high control mortality and inconsistent test mortalities.

STATISTICAL ANALYSES

Data were analyzed by weighted linear regression of log concentration plotted against logit transformation of the response.

RESULTS

TEST IV		TEST IV	
Mean Measured Concentrations (ppm)	No. Dead/No. Exposed	Mean Measured Concentration (ppm)	Exposed No. Dead/No.
268	30/30	245	30/30
183	21/30	157	17/30
101	29/30	82	0/30
51	0/30	41	1/30
25	0/30	20	1/30
Control	0/30	10.4	0/30
		Control	0/30

48-hr EC_{50} = 111 ppm (82-147 ppm)

CONCLUSIONS:

Validation Category: Core

Category Rationale: N/A

Category Repairability: N/A