TDMS

DATA EVALUATION RECORD

CASE GS ____ _____ PM ___ ___/___/___

CHEM 105001 TERBUFOS

BRANCH EEB DISC ___

FORMULATION 15% Granular

FICHE/MASTER ID FEØTERØ4

CITATION: USEPA. 1975. Report on the toxicity of Counter 15G to bluegill sunfish. (USEPA, CBIB, Beltsville, MD., Static jar test #894, 11/7/75, unpublished report)

SUBST. CLASS=

OTHER SUBJECT DESCRIPTORS
PRIM:

DIRECT REVIEW TIME= 4 hrs. (MH) START DATE 10/4/82 END DATE 10/27/82

REVIEWED BY: James D. Felkel
TITLE: Wildlife Biologist
ORG: Ecological Effects Branch, Hazard Evaluation Division (TS-769)
LOC./TEL.: Crystal Mall #2, Room 1112, 703-557-3113

SIGNATURE: James D. Felkel DATE: 12/8/82

APPROVED BY:
TITLE:
ORG:
LOC/TEL:

SIGNATURE: DATE:

4 pages

DATA EVALUATION RECORD

1. Chemical: Terbufos (Shaughnessy No. 105001)

2. Formulation: 15% Granular

3. Citation: USEPA. 1975. Report on the toxicity of Counter 15G to bluegill sunfish. (USEPA, CBIB, Beltsville, Md., Static jar test # 894, 11/7/75, unpublished report). MRID No. FE0TER04.

4. Reviewed By: James D. Felkel, Wildlife Biologist
Ecological Effects Branch
Hazard Evaluation Division (TS-769)

5. Date Reviewed: October 25, 1982

6. Test Type: Warmwater fish - 96-hour LC_{50}

A. Test Species: Bluegill sunfish (Lepomis macrochirus)

7. Reported Results: The 96-hour LC_{50} is 13.3 ppb (95% C.L. of 10.08-17.56 ppb).

8. Reviewer's Conclusions:

This study is scientifically sound and with an LC_{50} of 12.3 (9.8-15.2) ppb indicates that Counter 15G is very highly toxic to the bluegill sunfish. This study, if needed, meets the intent of proposed guidelines (7/10/78) for this formulation.

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METHODS

Method TSD 1.206 is cited. Acetone was the diluent. Fish were from the Welaka National Fish Hatchery and had an average weight of 1.98 g. Concentrations of 3.7-75 ppb were tested.

RESULTS

	LC_{50} (with 95% confidence limits)
24 hours	39.5 (31.9-49.0) ppb
48 hours	21.0 (15.7-28.1) ppb
96 hours	13.3 (10.08-17.56) ppb

REVIEWER'S ANALYSIS

Methods used are generally consistent with proposed guidelines (7/10/78). EPA computer analysis (attached) indicates a 96-hour LC_{50} of 12.3 (9.8-15.2) ppb (probit method). Counter 15G is thus considered very highly toxic to the bluegill sunfish.

CONCLUSIONS

1. Category: Core, for this formulation

2. Rationale: Study meets the intent of proposed guidelines (7/10/78) for this formulation.

3. Repairability: N/A

FENVEL TERBUFOS BLUEGILL LC50 15G

CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(PERCENT)
75	10	10	100	0.0976562
49	10	10	100	0.0976562
32	10	10	100	0.0976562
21	10	10	100	0.0976562
14	10	4	40	37.69531
9.7	10	2	20	5.46875
6.6	10	1	10	1.074219
3.7	10	0	0	0.0976562

THE BINOMIAL TEST SHOWS THAT 5.6 AND 21 CAN BE
USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT
CONFIDENCE LIMITS, BECAUSE THE ACTUAL CONFIDENCE LEVEL
ASSOCIATED WITH THESE LIMITS IS GREATER THAN 95 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS 14.73863

RESULTS CALCULATED USING THE MOVING AVERAGE METHOD

SPAN	G	LC50	95 PERCENT CONFIDENCE LIMITS	
6	0.1232867	11.46946	8.522105	14.67209

RESULTS CALCULATED USING THE PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT PROBABILIT
7	0.1724719	1	0.5815557

SLOPE = 5.335971
95 PERCENT CONFIDENCE LIMITS = 3.119956 AND 7.551985

LC50 = 12.25198
95 PERCENT CONFIDENCE LIMITS = 9.792025 AND 15.23607

LC10 = 7.082705
95 PERCENT CONFIDENCE LIMITS = 4.40084 AND 9.015407