DATE: 2/26/79

To: Product Manager, Wilson (21)
TS-767

Through: Dr. Gunter Zweig, Chief
Environmental Fate Branch

From: Review Section No. 1
Environmental Fate Branch

Attached please find the environmental fate review of:

Reg./File No.: 100-ANR

Chemical: N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester (Ridomil)

Type Product: Fungicide

Product Name:

Company Name: CIBA-GEIGY

Submission Purpose: Registration of Technical Product

Date in: 9/26/78

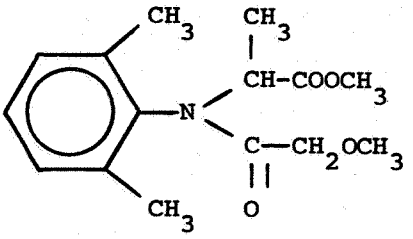
Date out: 2/26/79

1. INTRODUCTION

1.1 This is a submission for registration of technical CGA-48988 (Ridomil) for formulation use only.

1.2 See previous reviews of 100-EUP-1, 8G2121 dated November 1, 1978 and 100-EUP-62 dated 1978.

1.3 Structure of CGA-48988



2. DIRECTIONS FOR USE

2.1 This product is for formulation use only.

2.2 Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Pesticide or rinsate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies. Triple rinse (or equivalent) and offer for recycling, reconditioning or disposal in approved landfill or bury in a safe place. Consult federal, state or local disposal authorities for approved alternative procedures.

2.3 Keep out of lakes, streams or ponds.

3. DISCUSSION OF DATA

3.1 Hydrolysis of CGA-48988 under Laboratory Conditions, project report 26/76, Basle, August 10, 1976.

The hydrolysis of buffered solutions of CGA-48988 at 100 ppm were monitored at various pH's and temperatures. Analysis was accomplished by extraction of an aliquot of the buffered solution with methylene chloride followed by evaporation and taking up the residue with acetone. CGA-48988 in the acetone was determined by GC with a PN detector.

Studies using ^{14}C ring labeled CGA-48988 in 0.1N HCl and in pH 10 buffer at 70° C were run to identify degradation products. GC-MS techniques were used.

Recoveries were 95-100%.

4. CONCLUSIONS

1. At pH 5,7 and 9 and at 20-30° C, the halflife of CGA-48988 is not reached before 4 weeks.

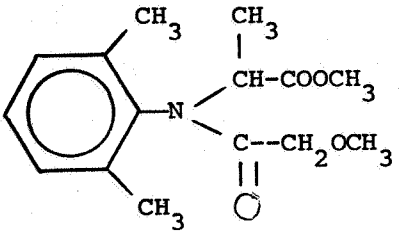
2. At pH 9-10 at 50-70° C, the halflife varies from 5 hours to 5 days. The halflife of the parent is 12 days in 0.1 N HCl at 70° C.

3. CGA-48988 is stable to the hydrolytic conditions normally found in the environment.

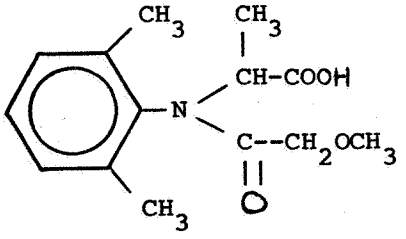
4. Under prolonged or exaggerated conditions (see results) when significant hydrolysis does occur, only one degradation product is found. It is N-2,6-dimethylphenyl-N-(2'-methoxyacetyl)-alanine.

5. This study is acceptable for all uses.

6. Parent and degradation products



Ridomil or CGA-48988, parent compound, N-(2,6-dimethylpheny)-N-(methoxyacetyl)alanine methyl ester



N-2,6-dimethylphenyl-N-(2'-methoxyacetyl)-alanine, the only product of hydrolysis at all pH's.

5. RECOMMENDATIONS

5.1 If this product is discharged into a waste water treatment system, then an activated sludge will be needed. If the results of the activated sludge study indicate a discharge into the aquatic environment, then additional data, for a direct discharge use, will be needed. See guidelines published July 10, 1978, FR 43, No. 132 for required studies.

5.2 If a restriction is placed on the label such as, "Do not discharge into a waste treatment system," or if the registrant states that the product will not be discharged into such systems, then the requirements for the proposed manufacturing use will be met and the activated sludge study in 5.1 above will not be needed.

Ronald E. Ney, Jr.
Samuel M. Creeger
February 26, 1979
Review Section #1
Environmental Fate Branch

Samuel M. Creeger March 5, 1979