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RENEY:mbs  
June 8, 1970

Evaluation of Pesticide Petition No. OF0972 for Mono(N,N-dimethylalkylamine) salt of endothall [7-oxabicyclo (2.2.1) heptane-2,3-dicarboxylic acid) calculated as endothall

Submitted by Pemsalt  
Filed April 24, 1970

INTRODUCTION

Refer to PP No. 7F0570 and 6G0503.

The alkyl groups in mono (N,N-dimethylalkylamine) are as in fatty acids of coconut oil.

The petitioner is proposing a tolerance of 0.1 ppm in or on cottonseed for the salt expressed as endothall.

The name and formulation of the product is as follows:

Accelerate (4581- )  
salt of Endethal 15.9 %



acid equivalent 5.5%  
contains 0.52 lbs A/gal.

DIRECTIONS FOR USE

Cotton - Accelerate with Organic Phosphate 1 pt of organic phosphate with 1.5 pt of Accelerate (0.0975 lbs A/A)/A. Tank mix with water. Accelerate with Sodium Chlorate 1 pt to 1.5 pt (0.065 to 0.0975 lbs A/A)/A. Leaf drop occurs in about 3-7 days. Apply when 50% or more of bolls are open (about 5-7 days before harvest). Applications can be made until frost.

ANALYTICAL METHOD

GC using detection by dual hydrogen flame irrigation. Extract with Hcl acidified acetone, concentrate and partition to remove oil and oil soluble material. The endothall fraction is concentrated by backing with glacial acetic acid and converted to the N-methoxyimide derivative by reaction with methoxyamine hydrochloride. The imide is partition into chloroform, taken to dryness. Analysis by GC.

INERT INGREDIENT INFORMATION IS NOT INCLUDED



Analytical method has poor reproducibility.

#### DISCUSSION OF DATA

Radiotracer  $C^{14}$  ring labeled studies indicated that endothall is completely metabolized to  $CO_2$ ,  $H_2O$  and plant part.

$C^{14}$  studies on plants done with the following chemicals.

1. Endothall
2. Endothall (Disodium hexahydroendoxyphthalate).

$C^{14}$  feeding studies using the following.

1. Endothall (disodium salt).

#### Soil Data.

1. Half (1/2) life less than 2 wks.
2. Decomposed by UV light.
3. Decomposed by microorganisms.
4. Decomposed by moisture.
5. Can be absorbed by soils then desorbed by  $H_2O$ .
6. Can leach by is degraded. (5" rains leaches Endothall to 1").
7. Can run off, but is degraded.
8. Degraded by  $H_2O$ .
9. No build up in fish.

Rat feeding study - 90% excreted in feces and the remainder in urine and  $CO_2$ .

No build up in goats, or milk, hens or eggs.

Some of the data submitted on cotton are listed:

DMCA-Di-dimethylcocoamine (Accelerate)

D = DEF

F = Folex

C = Chlorate

Pts/A For Each Chemical	Lbs A/A DMCA	Pt/A Other Chemicals	PHI	PPM Found Seed
3.0	0.2	D	4	0.02
1.5	0.1	D	4	0.04
1.5	0.1	F	4	0.027
1.5	0.1	F	4	0.047

Data appear to be acceptable for cottonseed.

Data submitted on hulls and meal do not clearly state lbs A/A and PHI. Since no request for tolerance is made on hulls and meal this will not be questioned at this time.

RECOMMENDATION

A favorable opinion is given.

Note - Environmental data submitted is adequate.  
Note - The analytical method is not very good.

REY

June 8, 1970

**Subject:** Pesticide Petition Number OF0972 requesting a tolerance for mono(N,N-dimethylalkylamine) salt of endothall (7-oxabicyclo (2.2.1) heptane-2,3-dicarboxylic acid) calculated as endothall submitted by Pennsalt, and filed April 24, 1970

**To:** Charles L. Smith, Petition Control Office

We have examined the residue data, analytical methods, and other information in this petition for a tolerance of 0.1 part per million (ppm) in or on cottonseed.

It is the opinion of this Department that the proposed tolerance reasonably reflects the amount of residue likely to result.

Chemical Evaluation Staff

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