

US EPA ARCHIVE DOCUMENT

125 (001)

Shaughnessy No.: 125601

Date out EAB: 15 MAR 1984

To: R. Taylor
Product Manager 25
Registration Division (TS-767)

From: Samuel M. Creeger, Chief *SMC*
Environmental Chemistry Review Section 1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769c)

Attached, please find the EAB review of:

Reg./File No.: 10182-EUP-GU

Chemical: paclobutrazol

Type Product: Growth regulator

Product Name: PARLAY 50WP

Company Name: ICI Americas

Submission Purpose: EUP - ornamental and turf grasses grown for
seed - additional info

ZBB Code: other Action Code: 700

Date In: 2/16/84 EAB No.: 4196

Date Completed: 3/14/84 TAIS (Level II) Days

Deferrals To: 61 2

Ecological Effects Branch

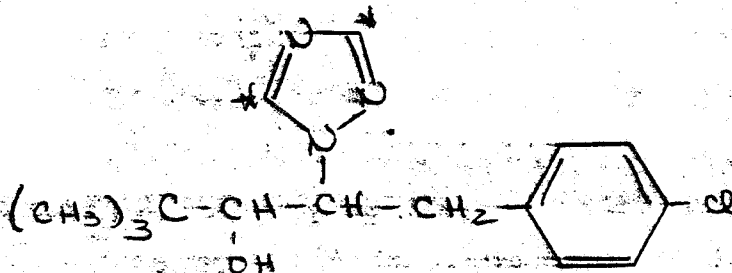
Residue Chemistry Branch

Toxicology Branch

1.0 INTRODUCTION

ICI Americas Inc has submitted an application for an EUP for Parlay 50WP, a plant growth regulator, on grass seed crops. Accession No. 252007

2.0 Parlay; PP333: paclobutrazol
(2RS,3RS)-1-(4-chlorophenyl)-4,4-dimethyl-2-(1H-1,2,4-triazol-1-yl)pentan-3-ol



*position of ¹⁴C atoms in this study

3.0 DISCUSSION

ICI is requesting an EUP to test Parlay on 5,000 acres for each of two years at an average application rate of 0.75 lb ai/acre. Maximum label rate is 1.0 lb ai/acre. According to the label air and ground methods of application can be used. Two applications per year are permitted with the second application 1-8 weeks after the first application.

No treated field during this EUP will be grazed upon or any crop or crop wastes used for feed or bedding purposes. An 18 month restriction for the planting of food or forage crops will be in effect according to the EUP application.

Only one environmental fate study was submitted in this package - fish accumulation.

3.1 Flow-through Bluegill Sunfish Accumulation Study. Report No. RJ0321B. M.J. Hamer and I.R. Hill, 1983.

Treated and control tanks were maintained at 18°C. A nominal concentration of 0.5 mg/l PP333 was maintained. Dosing was carried out for 34 hours before fish (125) were added to both tanks. Water and fish were analyzed according to schedule given in Table 1. Total radioactivity in fish samples was determined by combustion. The evolved ¹⁴CO₂ was analyzed by LSC. Water samples were also analyzed by LSC. Distribution of radioactivity on chromatograms was determined by radiochromatogram scanning.

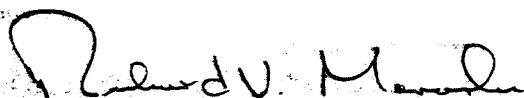
The residues in whole fish, viscera and muscle were measured. No increase in residue was noted after 3 days of exposure and the exposure phase was terminated after 14 days. The bioconcentration factors were calculated to be 44 in whole fish, 20 in muscle, and 248 in viscera. (See Table 4). During depuration, levels reached 1% or less of applied radioactivity in 7 days (Table 5).

Conclusion

A relatively low potential exists for accumulation in fish and that which is accumulated is rapidly eliminated.

4.0 CONCLUSION and RECOMMENDATION

Accumulation in fish does not appear to occur to a significant extent. Depuration is essentially complete in a week. This study satisfies fish accumulation requirement and together with previously submitted (review 3/13/84) EF data satisfies the requirements for the EUP on grass grown for seed. An 18 month crop restriction satisfies crop rotation concerns for this EUP.



Richard V. Moraski, Ph.D.

Chemist, Environmental Chemistry Review Section No. 1

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Pages 4 through 6 are not included in this copy.

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