



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

JAN - 4 1990

MEMORANDUM

SUBJECT: Determination of the Photolysis Rate of  $^{14}\text{C}$ -  
Thiabendazole on the Surface of Soil (Draft Report)

FROM: Bruce F. Kitchens, Chemist *Bruce Kitchens*  
Environmental Chemistry Review Section #2  
Environmental Fate and Groundwater Branch/EFED (H7507C)

THRU: Emil Regelman, Supervisory Chemist *Emil Regelman*  
Environmental Chemistry Review Section #2  
Environmental Fate and Groundwater Branch/EFED (H7507C)

TO: Frank Rubis  
Generic Chemical Support Branch  
Special Review and Reregistration Division (H7508C)

Conclusion:

Overall study design and presentation of the draft report is good. Registrant presents the calculated rate constants and half-lives of  $^{14}\text{C}$ -Thiabendazole in both systems, exposed and dark, as determined from the study. This study meets most of the criteria for Soil Photolysis under artificial light as defined by the Soil Photolysis S.E.P. and can be reviewed by the Agency when a final report is completed and submitted.

Discussion:

The following discussion presents some deficiencies that the registrant may be concerned with:

(1) Soil used for this study was not shown to be microbially viable prior to dosing soils.

(2) Labeling of scintillation and temperature printouts are inadequate (i.e. no title, no date, or technician initials).

(3) TLC figure 9 and TLC diagram on page 312 needs to be presented more clearly.

(4) Volatiles should be trapped, even though material balance in both exposed and dark systems was > 90%.

(5) State how the 1N potassium hydroxide/methanol solution was prepared.

cc: Hank Jacoby, Branch Chief  
Art Amchan LE-132P (OGC)  
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