

DP Barcode : D233076
 PC Code No : 128867
 EEB Out :

APR 23 1997

To: GEORGE LARocca PM13 (ADAM HEYWARD)
 Product Manager

APR 23 1997

From: Daniel D. Rieder, Acting Chief
 Ecological Effects Branch/EFED (H7507C)

Attached, please find the EEB review of...

Reg./File # : 10182-URU DP CASE: 046828 SUB# S518006
 Chemical Name : CYHALOTHRIN
 Type Product : INSECTICIDE
 Product Name : KARATE CS
 Company Name : ZENECA
 Purpose : REVIEW DATA ON RELEASE RATE OF AI FROM CAPSULES
 COMPARES EFFECTS OF CS AND EC FORMULATIONS OF LAMBDA-CYHALOTHR
 ON ARTHROPODS
 Action Code : 166 Date Due :
 Reviewer : ALLEN VAUGHAN Date In EEB:

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1(A)			72-2(A)			72-7(A)		
71-1(B)			72-2(B)			72-7(B)		
71-2(A)			72-3(A)			122-1(A)		
71-2(B)			72-3(B)			122-1(B)		
71-3			72-3(C)			122-2		
71-4(A)			72-3(D)			123-1(A)		
71-4(B)			72-3(E)			123-1(B)		
71-5(A)			72-3(F)			123-2		
71-5(B)			72-4(A)			124-1		
72-1(A)			72-4(B)			124-2		
72-1(B)			72-5			141-1		
72-1(C)			72-6			141-2		
72-1(D)			OTHER	44191401	S	141-5		

Y=Acceptable (Study satisfied Guideline)/Concur
 P=Partial (Study partially fulfilled Guideline but additional information is needed)
 S=Supplemental (Study provided useful information but Guideline was not satisfied)
 N=Unacceptable (Study was rejected)/Nonconcur



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

APR 23 1997

MEMORANDUM

SUBJECT: EEB Review of Release Rate and Residual Toxicity Comparisons Between CS and EC Formulations of Cyhalothrin (PC Code# 128867; DP Barcode 233076; ID# 010182-URU; Case# 046828; Sponsor: Zeneca Ag. Products)

FROM: Daniel D. Rieder, Acting Chief *Daniel Rieder* 4/22/97
Ecological Effects Branch
Environmental Fate and Effects Division (7507C)

TO: George LaRocca, PM-13
Registration Division (7505C)

EEB has reviewed the material submitted by Zeneca in support of the registration of Karate 2CS, a microencapsulated cyhalothrin product. The submitted material reported comparisons between Karate 2CS and a standard EC formulation of cyhalothrin, with regard to the release rate and residual toxicity of the two products. The test organisms were pest arthropods (insects and spider mites) and beneficial insects. The purpose of the submission was to demonstrate that residual hazard to the test arthropods (and via extrapolation, to honey bees) from use of Karate 2CS would be no greater than residual hazard from the EC formulation.

The submitted studies demonstrated little or no significant difference between the two products in terms of knockdown time or residual efficacy. Although the duration of release was not specifically investigated, similarities in knockdown time and toxic effect levels indicate that duration of release is likely to be similar for the two products.

The submitted material is sufficient to satisfy EEB's concerns. We conclude that the residual bee hazard from Karate 2CS will not differ significantly from that of the standard EC formulation. No additional testing with Karate 2CS and bees is required.

Any questions or comments on this memo should be referred to Allen Vaughan at 305-6464.

ZENECA

Zeneca Ag Products
1800 Concord Pike
P.O. Box 15458
Wilmington, DE 19850-5458

Federal Express

Telephone (302) 886-1000
Fax (302) 886-1553

January 7, 1997

Mr. Adam Heyward
Product Manager Team (13)
Insecticide-Rodenticide Branch
Registration Division (7505C)
U.S. Environmental Protection Agency
1921 Jefferson Davis Highway
Room 266A, Crystal Mall 2
Arlington, VA 22202

441914-00

Dear Mr. Heyward:

*Re: Karate® 2CS Insecticide
EPA File Symbol 10182-URU
Additional Data on Honey Bees*

In our meeting of November 5, 1996, with yourself, Joanne Edwards and Al Vaughn, it was agreed that registration of the Karate 2CS microcap formulation would not require Guideline Test 141-5 (field testing for pollinators) or additional data on release rate of active ingredient from the capsules.

The Agency agreed (1) that the bioassay data presented at this meeting demonstrated the quick release of the active ingredient from the capsule and (2) that a field study would not be expected to show any increased risk to bees over that predicted for the registered EC formulation. It was agreed that the proposed label statements regarding no direct sprays to bees and to avoid sprays when bees are actively foraging would be adequate label mitigation for registration.

Zeneca did agree to submit a report of the bioassay data discussed at the meeting. This data is enclosed as:

Volume 1: A Comparison Between the Effects of the EC and CS Formulations of Lambda-Cyhalothrin on Selected Pests and Beneficial Arthropods.



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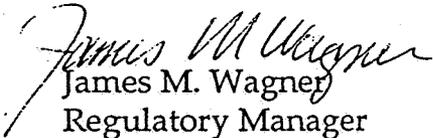
A business unit of Zeneca Inc.

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With this submission, we have responded to all of the issues arising from EPA reviews of data on this formulation. Product Chemistry, Acute Toxicity and Ecological Effects reviews have been completed. The only outstanding reviews are from Residue Chemistry and Environmental Fate.

Zeneca placed this registration on the EPA Priority List in January 1996. *We have anticipated EPA registration approval of this formulation by March of this year to enable production and sales for use on cotton this year.* We would be grateful for your help in meeting this timeframe.

Sincerely,


James M. Wagner
Regulatory Manager
tel (302) 886-1219
fax (302) 886-1572

enc.

cc: George LaRocca, EPA
Susan Lewis, EPA

DATA TRANSMITTAL DOCUMENT

1. Name and Address of Submitter

James M. Wagner
ZENECA Ag Products
P.O. Box 15458
Wilmington, DE 19850-5458

2. Regulatory Action In Support Of Which This Package Is Submitted

Registratin of KARATE 2CS Insecticide - Additional Data on Honey Bees

3. Transmittal Date

January 7, 1996

4. List of Submitted Studies

Vol. 1 H.A. Yearsdon, P. Wege, E.D. Pilling, "A Comparison Between the Effects of the CS and EC Formulations of Lambda-cyhalothrin on Selected Pests and Benefical Arthropods.", Zeneca Agrochemicals (ZENECA LIMITED), Jealott's Hill Research Station, Bracknell, Berkshire, UK, Report Number ZA010797, 13 pages, January 7, 1997, Guideline Number §N/A.

MRID# 44191401

Company Official: James M. Wagner
Name

James M. Wagner
Signature

Company Name: Zeneca Ag Products

Company Contact: James M. Wagner
Name

302-886-1219
Phone