(3)

Shaughnessy Number: 128857

Date out of EAB: 1/2/90

No Studies

To: Lewis/Stone
Product Manager 21
Registration Division (H7505C)

From: Emil Regelman, Supervisory Chemist
Environmental Fate Review Section #2
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

w/ Nelson for ER

Thru: Hank Jacoby, Chief
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

Attached, please find the EAB review of...

Reg./File #: 707-215, -221

Chemical Name: Myclobutanil

Type Product: Fungicide

Company Name: Rohm and Haas

Purpose: petition for permanent tolerance on stone fruits

Date Received: 10/17/89

Action Code: 330

EAB #(s): 90-0028, 90-0029

Total Reviewing Time: 1.5

Deferrals to: ___Ecological Effects Branch, EFED

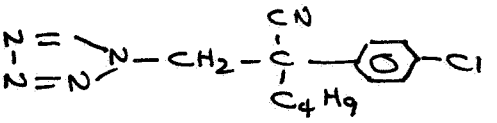
___Science Integration and Policy Staff, EFED

___Non-Dietary Exposure Branch, HED

___Dietary Exposure Branch, HED

___Toxicology Branch

1. CHEMICAL:

chemical name:	α-butyl-α(4-chlorophenyl)-1H-1,2-triazole-1-propanenitrile
common name:	Myclobutanil
trade name:	Systhane, Rally
structure:	
CAS #:	66871-89-0
Shaughnessy #:	128857

2. TEST MATERIAL: n.a.

3. STUDY/ACTION TYPE: petition for permanent tolerance on stone fruits

4. STUDY IDENTIFICATION: n.a.

5. REVIEWED BY:

Typed Name:	E. Brinson Conerly
Title:	Chemist, Review Section 2
Organization:	EFGWB/EFED/OPP

E. B. Conerly 1005 12/27/89

6. APPROVED BY:

Typed Name:	Emil Regelman
Title:	Supervisory Chemist, Review Section 2
Organization:	EFGWB/EFED/OPP

N Nelson for ER 12/27/89

7. CONCLUSIONS:

No environmental fate information has been added since the most recent review, ~~and~~ and none is contained in this submission. Evaluation of this residue data is the responsibility of Dietary Exposure Branch. However, based on the summary contained in the material transmitted to EFGWB, it appears to this reviewer that application to cherries was at less than maximum dosage (i.e. 1.14 lb actual vs 1.4 maximum).

8. RECOMMENDATIONS:

Subject to the comment above and concerns identified by other Branches, EFGWB does not object to this tolerance.

9. BACKGROUND:

The applicant is requesting tolerances of 5.0 ppm for cherries and 2.0 ppm for other stone fruits, and presents a summary of residue data to support that tolerance. It appears to this reviewer that maximum dosage was not applied to cherries (see pg 0006i/402i vs label).

There are no new environmental fate data in this submission. Available data indicate that a major route of disappearance of myclobutanil will be diffusion/dilution since it appears to be resistant to most environmental breakdown processes. The status of data requirements is as follows:

hydrolysis -- satisfied -- stable at pHs 5, 7, 9

photolysis in water -- satisfied -- stable to photolysis in water

photolysis in soil -- satisfied -- extrapolated $t_{\frac{1}{2}}$ ca. 143 days

aerobic soil metabolism -- satisfied -- $t_{\frac{1}{2}}$ 61-71 days -- major product is 1,2,4-triazole up to ca 15%, with CO_2 and unextractables in lesser amounts

anaerobic soil metabolism -- satisfied -- resistant to anaerobic metabolism -- no detectable degradation after ca. 60 days

leaching -

satisfied for parent -- moderately mobile -- k_ds 1.46 - 9.77 for adsorption, 0.47-4.18 for desorption in five soils: clay loam, sand, silt loam, sandy loam, clay

satisfied for "aged" compound -- highly mobile degradate

Silty clay, clay loam, sand, silty clay loam, and sandy loam yielded an average k_{oc} of 112±58 (range 43 to 202). On this basis, triazole falls in the high potential mobility category in soil (50-150 being the range for "high mobility").

The k_ds for the desorptions were found to be much higher than those for the adsorptions (an average of 77% higher for the first desorption and 704% higher for the second), suggesting that some of the triazole may be irreversibly bound to the soils. This would indicate that triazole may not be as mobile as one would predict based upon the adsorption results.

terrestrial field dissipation -- not satisfied -- a submitted study was deemed unacceptable, due to inadequacy of sampling, inconsistent data, and apparent analytical difficulties.

A new field dissipation study on myclobutanil has been required as a condition of registration on apples and grapes.

fish bioaccumulation -- waived, based on low k_{ow}s for parent and degradates. The compound is not expected to bioaccumulate.

In a previous review (EBC 11/8/88), EFGWB reserved any further data requirement on triazole, and deferred to the Residue and Toxicology Branches for an assessment of the dietary risk potential.

A ground water assessment states that the compound is mobile and persistent in laboratory studies, and is therefore a potential leacher, but that field dissipation data have been inconclusive. Results from field studies now in progress are expected to clarify the need for additional studies such as ground water monitoring. Because of limited use of the compound, imposition of further data requirements is deferred until these field studies are received and evaluated.

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES: n.a.

11. COMPLETION OF ONE-LINER: no new information

12. CBI APPENDIX: n.a.