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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

Subject: Fenbuconazole Review Studies

From: Anthony F. Maciorowski, Chief
Ecological Effects Branch
Environmental Fate and Effects Division

7/26/94

To: Cynthia Giles-Parker, Product Manager 22
Registration Division

The following study (D195137) was reviewed by EEB for the registration of the new chemical Fenbuconazole (RH7592). This study provides information which can be used in the risk assessment for the registration of RH7592.

Data Requirements	Test	Bibliographic	Validation	Results
122-2 Aquatic Plant - Tier 1	96.7% a.i.	429147-02	Supplemental	EC_{50} ~ 0.25 mg/L

If you have any questions concerning the above, please feel free to contact Regina Hirsch (305-5366).

DATA EVALUATION RECORD

1. **CHEMICAL:** RH 7592 Technical (Fenbuconazole)
Shaughnessey No. 129011.

2. **TEST MATERIAL:** RH 7592 technical; Batch No. BPP-3-1786R; 96.7% active ingredient; a white powder.

3. **STUDY TYPE:** 122-2. Growth and Reproduction of Aquatic Plants - Tier 1. Species Tested: *Scenedesmus subspicatus*.

4. **CITATION:** Douglas, M.T. & R.W.S. Halls. 1990. The algistatic Activity of RH 7592 Technical. Rohm and Haas Report No. 90RC-0111. Conducted by Huntingdon Research Centre Ltd., Cambridgeshire, England. Submitted by Rohm and Haas Company, Philadelphia, PA. EPA MRID No. 429147-02.

5. **REVIEWED BY:**

Regina Hirsch, Wildlife Biologist **Signature:** Regina Hirsch
Ecological Effects Branch
Environmental Fate and Effects Division **Date:** 20 July 1994

6. **APPROVED BY:**

Les Touart, Section 1 **Signature:** L Touart
Ecological Effects Branch
Environmental Fate and Effects Division **Date:** 20 July 94

7. **CONCLUSIONS:** This study is scientifically sound but does not meet the guideline requirements for a Tier 1 non-target aquatic plant study. The test procedures deviated significantly from the recommended protocols. Exposure to RH7295 technical at a concentrations 0.25, 0.50, 1.0, and 2.0 mg ai/L showed 47%, 55%, 65%, and 70% in growth reduction of *S. subspicatus* over the 4-day test period.

8. **RECOMMENDATIONS:** N/A.

9. **BACKGROUND:**

10. **DISCUSSION OF INDIVIDUAL TESTS:** N/A.

11. **MATERIALS AND METHODS:**

A. **Test Species:** The alga used in the test, *Scenedesmus subspicatus*, came from Culture Centre of Algae and Protazoa c/o Freshwater Biological Association,

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13. **STUDY AUTHOR'S CONCLUSIONS/QUALITY ASSURANCE MEASURES:** No conclusions other than those stated were made by the author.

Quality Assurance and Good Laboratory Practice statements were included in the report indicating compliance with EPA Good Laboratory Practice Standards, 40 CFR Part 160.

14. **REVIEWER'S DISCUSSION AND INTERPRETATION OF STUDY RESULTS:**

A. **Test Procedure:** The test procedure and the report did not meet the requirements of the SEP and Subdivision J guidelines. The following are deviations:

Light intensity during the test was 7 klux. The recommended light intensity is 4 klux.

It was not stated if the illumination was cool or warm. Guidelines recommend cool illumination.

The initial cell inoculum (20,000 cells/ml) was higher than recommended (3000 cells/ml).

The test temperature was not monitored during the study.

No justification was given as to why the author used *Scenedesmus subspicatus* rather than *Selenastrum capricornutum*.

Absorbance readings were not equated to number of cells per biomass for test concentrations.

B. **Statistical Analysis:** Upon review of the cell density data, it is apparent that the test substance had considerable effect on cellular growth, up to 70% inhibition at concentrations of 2.0 mg/L.

C. **Discussion/Results:** This study is scientifically sound but does not meet the guideline requirements for a Tier 1 non-target aquatic plant study. Exposure to RH7295 technical at a concentrations 0.25, 0.50, 1.0, and 2.0 mg ai/L showed 47%, 55%, 65%, and 70% in growth reduction of *S. subspicatus* over the 4-day test period (See Table 2).

RIN 3477-95

EEB FENBUCONAZOLE REVIEW

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