Shaughnessy No.:128901

Date Out of EAB: NOV 22 1985

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

From: Samuel M. Creeger, Chief
Review Section #1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769)

Attached, please find the EAB review of...

Reg./File # : 325-UGA

Chemical Name: DPX-F6025

Type Product : Herbicide

Product Name : CLASSIC

Company Name : DuPont

Purpose : Evaluation of Protocols of Photodegradation on Soil and in Water

Date Received: 10/3/85

Action Code(s): 111

Date Completed: NOV 22 1985

EAB #(s) : 6019

days: 1.5

Deferrals to:

____ Ecological Effects Branch

____ Residue Chemistry Branch

____ Toxicology Branch

Monitoring study requested by EAB: ☐

Monitering study voluntarily conducted by registrant: ☐

1. CHEMICAL: DPX-F6025, CLASSIC™ -see earlier reviews for the chemical structure and the physical properties of the chemical.

2. TEST MATERIAL: N/A

3. STUDY/ACTION TYPE: Protocol Review of Proposed Photolysis Studies.

4. STUDY IDENTIFICATION: Photolysis

(a) In Water

(b) On Soil

5. REVIEWED BY:

Akiva D. Abramovitch, Ph. D.
Chemist
Environmental Chemistry Review Section 1/EAB/HED/OPP

Abramovitch
Date: 11/22/85

6. APPROVED BY:

Samuel M. Creeger, Chief
Supervisory Chemist
Environmental Chemistry Review Section 1/EAB/HED/OPP

Sam M Creeger
NOV 22 1985
Date: / /85

7. CONCLUSIONS:

A) Aqueous Photolysis:

The proposed photolysis study in water is generally acceptable particularly in calling for natural sunlight and measuring the total solar irradiation applied to the solution. Sterile quartz tubes, solvents and buffers will be some of the measures taken to obtain reliable results. The study will be conducted at 25°C (thermostatically controlled) with appropriately ^{14}C labeled materials at a chosen pH in which minimal hydrolysis occurs preferably in the range of pH 5-9. Although buffers should maintain constant pH throughout the experiment, the pH should be monitered periodically as a precaution. Major degradation pathways and degradates will be fully identified. Some questions are: (1) What kind of analytical procedures will be used for qualitative and quantitative analysis of the degradates? GLC (EC), MS, HPLC, TLC? (2) Are authentic samples of potential degradates available? Use of multiple analytical methods for additional confirmation are recommended!

The reviewer has additional concerns with regard to the use of artificial light: The experiment should measure the intensity and range of light after passing through the appropriate filters and prior to radiating the solution and demonstrate that sunlight conditions were simulated throughout the experiment (measurements should also be taken at the end of the experiment).

(B) Photolysis on Soil:

The proposed photolysis on soil is generally acceptable. The only additional remark to those stated with regard to the aqueous photolysis

protocol is the need to conduct the experiment at the maximum application rate of DPX-F6025.

8. RECOMMENDATIONS:

Generally, the protocols are acceptable and the EAB does not have any general objections. However, specific evaluation of protocols can only be provided upon submission of detailed experimental conditions. The EAB noted that the registrant has a clear understanding that actual use (environmental) conditions (including sunlight conditions) should be simulated and appears to be able to conduct experimentation both outdoor and indoor as indicated by Figures 1 (photolysis on soil) and 2 (aqueous photolysis). The protocol was evaluated for DPX-F6025 and therefore, may not be acceptable for use with other chemicals.

9. BACKGROUND:

A. Introduction: See earlier EAB reviews of Sept. 9, 1985

B. Directions for Use: See EAB reviews of Sept. 9, 1985

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES:

A. Study Identification:

Protocol for Photodegradation of a ^{14}C Pesticide in Water.

B. Material and Methods:

Please see attached protocol.

C. Reported Result: N/A

D. Study Author's Conclusions: N/A

E. Reviewer's Discussion and Interpretation of Study Results: N/A

A. Study Identification:

Protocol for Photodegradation of a ^{14}C-Radiolabeled Pesticide on Soil.

B. Material and Methods:

Please see attached protocol.

C. Reported Results: N/A

D. Study Author's Conclusions: N/A

E. Reviewer's Discussion and Interpretation of Study Results: N/A

11. COMPLETION OF ONE LINER: N/A

12. CBI APPENDIX:

None