

Date Out EFB: 02 JUL 1981

PROPRIETARY

To: Product Manager Gee (PM 17)
TS-767

From: Dr. Willa Garner *W. Garner for*
Chief, Review Section No. 1
Environmental Fate Branch

Attached please find the environmental fate review of:-

Reg./File No.: 201-401

Chemical: Pydrin

Type Product: Insecticide

Product Name: Pydrin

Company Name: Shell

Submission Purpose: Review of soil metabolism study

ZBB Code: other

ACTION CODE: 571

Date in: 5/4/81

EFB # 833

Date Completed: 02 JUL 1981

TAIS (level II)

Days

Deferrals To:

62

2

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

1.0 INTRODUCTION

Purpose

Shell Chemical Company is requesting review of soil metabolism study for Pydrin (submission of 4/1/81). The company resubmitted a summary of five soil metabolism studies which, according to their letter of 4/1/81, were previously submitted on 3/24/81. We could not locate the date on the company's letter summarizing soil metabolism data, nor did we find similar letters in our files. Additionally, the summary does not address several parameters normally found in the full text of data (see enclosure).

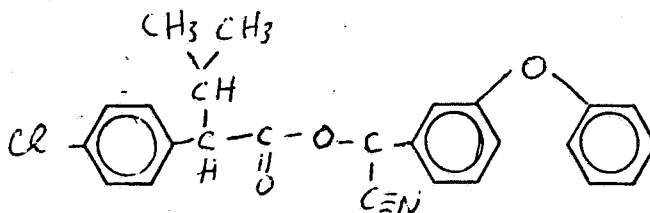
1.2 Background

Pydrin, an insecticide commonly known as fenvalerate, is currently registered for insect control in several field crops (# 201-401). In our previous review of 11/19/80, studies on hydrolysis, effects on microbes, soil field dissipation, and leaching were acceptable. However, the protocol on soil field dissipation indicated that GLC analysis was used to quantify the amount of parent compound which did not include use of other techniques such as TLC or HPLC as well as analyses for degradation products (EPA letter of 12/16/80). According to Shell Chemical Company letter of 4/1/81, analytical methodology for the appropriate metabolites has been developed and selected core samples of the soil field dissipation studies are being analyzed for those metabolites. Reports of these analyses will be submitted when completed.

1.3 Chemical

Common name : fenvalerate
Trade name : pydrin
Chemical name: cyano (3-phenoxyphenyl)
methyl 4-chloro-x-(1-methylethyl)benzeneacetate
30% EC (2.4 lbs ai/gal).

Structural formula:



MW 419.9
Vapor pressure at 25°C 1.1x10⁻⁸mm Hg
Soluble in organic solvent, not in water
Type: Insecticide

2.0 DISCUSSION OF DATA (See attached company letter which gives a summary of five aerobic and anaerobic soil metabolism studies.

3.0 RECOMMENDATION

3.1 The aerobic and anaerobic soil metabolism summaries were deficient and lacked several parameters. Therefore, we request the full data for review.

3.2 Data gaps regarding field dissipation studies as shown in our letter of 12/16/80 must be addressed.

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