

US EPA ARCHIVE DOCUMENT

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PROPRIETARY

(19)

Date Out: EFB: Feb 27 1981

TOX

To: Product Manager 25 Taylor
TS-769

From: Dr. Willer Garner
Chief, Review Section No. 1
Environmental Fate Branch

S.I.C. / for

Attached please find the environmental fate review of:

INERT INGREDIENT
INFORMATION DELETED

Reg./File No.: 524-308

Chemical:

Type Product: H

Product Name: Roundup

Company Name: Monsanto

Submission Purpose: follow-up to meeting on EEC calculations

ZBB Code: Other

ACTION CODE: 311, 336

Date in: 2/25/81

EFB # 773, 774

Date Completed: FEB 27 1981

TAIS (level II)

Days

Deferrals To:

67

1

Ecological Branch

Residue Chemistry

Toxicology Branch

Introduction

EFB and EEB personnel met with Monsanto representatives on 2/23/81 to discuss EEC calculations for [redacted] A Surfactant (in Roundup). At that meeting the registrant indicated that the surfactant binds strongly to soil (the calculations assumed the opposite since the surfactant is miscible with water) and that Kd values could be gleaned from the sterile controls data in the soil metabolism study (Acc. no. 093850). It was agreed that the data in that study would be looked at and, if warranted, the EECs would be recalculated.

Comments

The data in the soil metabolism study would of course not satisfy the soil adsorption/desorption data requirement for active ingredients. However, the data do support Monsanto's contention that the surfactant binds strongly to soil. Pseudo Kd values were determined from a mathematical manipulation of the data on p. 32. They were

| | |
|----------------------|-------------|
| Ray soil (1% OM) | 57 |
| Norfolk soil (6% OM) | 34 |
| Drummer soil (1% OM) | 87 |
| | (Ave. = 59) |

It is clear that the soil binding in this case is not related to partitioning into the organic matter (as was claimed in the report discussion) and that the surfactant binds strongly to soil. All past EEC calculations for [redacted] A surfactant must be redone. EEB was so notified.

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Environmental Fate Branch
Hazard Evaluation Division

Joe C. Reinert

• MEET INGREDIENT INFORMATION DELETED

file last updated 11/7/79

ACCEPTABLE DAILY INTAKE DATA

| RAT, Older | NOEL | S.F. | ADI | MPI |
|------------|--------|------|-----------|-------------|
| mg/kg | ppm | | mg/kg/day | mg/day/60kg |
| 5.000 | 100.00 | 100 | 0.0500 | 3.0000 |

Published Tolerances

| CROP | Tolerance | Food Factor | mg/day/1.5kg |
|--------------------------|-----------|-------------|--------------|
| Grain Crops (64) | 0.100 | 13.79 | 0.02069 |
| Avocados (6) | 0.200 | 0.03 | 0.00009 |
| Citrus Fruits (33) | 0.200 | 3.81 | 0.01144 |
| Coffee (36) | 1.000 | 0.75 | 0.01119 |
| Cottonseed (41) | 0.000 | 0.15 | 0.01350 |
| Grapes, inc raisins (66) | 0.100 | 0.49 | 0.00074 |
| Leafy Vegetables (80) | 0.200 | 2.76 | 0.00828 |
| Molasses (96) | 2.000 | 0.03 | 0.00092 |
| Nuts (101) | 0.200 | 0.10 | 0.00051 |
| Pome Fruits (126) | 0.200 | 2.79 | 0.00837 |
| Root Crop Veg (138) | 0.200 | 11.00 | 0.03299 |
| Seed&Pod Veg (143) | 0.200 | 3.66 | 0.01098 |
| Soybeans (148) | 6.000 | 0.92 | 0.08263 |
| Palm Oil (202) | 0.100 | 0.03 | 0.00005 |
| Kidney (203) | 0.100 | 0.03 | 0.00005 |
| Pistachio nuts (210) | 0.200 | 0.03 | 0.00009 |
| Liver (211) | 0.100 | 0.03 | 0.00005 |
| Sugar, cane&beet (154) | 0.100 | 3.64 | 0.00546 |

MPI 3.0000 mg/day/60kg TARC 0.2078 mg/day/1.5kg % ADI 6.93

Unpublished, Tox Approved 8E2122, 9H5196, 9F2223, 9F2162

| CROP | Tolerance | Food Factor | mg/day/1.5kg |
|------------------------|-----------|-------------|--------------|
| Sugar, cane&beet (154) | 1.900 | 3.64 | 0.10369 |
| Molasses (96) | 18.000 | 0.03 | 0.00828 |
| Bananas (7) | 0.200 | 1.42 | 0.00426 |
| Olives (104) | 0.100 | 0.06 | 0.00009 |
| Stone Fruits (151) | 0.200 | 1.25 | 0.00374 |

MPI 3.0000 mg/day/60kg TARC 0.3279 mg/day/1.5kg % ADI 10.93

Current Action 9F2163, 9H5204

| CROP | Tolerance | Food Factor | mg/day/1.5kg |
|----------------------------|-----------|-------------|--------------|
| Cucurbits (49) | 0.100 | 2.84 | 0.00426 |
| Fruiting Vegetables (60) | 0.100 | 2.99 | 0.00449 |
| Small fruit, berries (146) | 0.100 | 0.83 | 0.00124 |
| Hops (73) | 0.100 | 0.03 | 0.00005 |
| Fish, shellfish (59) | 2.000 | 1.08 | 0.03250 |
| Potable water (198) | 0.100 | 133.33 | 0.20000 |

