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

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

FEB - 5 1990

MEMORANDUM

SUBJECT: Pyridate Herbicide - Eight-Point Free-Standing Summary

TOX Chem No.: 716A

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Registrant: Agrolinz, Inc., Memphis, TN

Attached please find the "8-Point Free-Standing Summary" prepared by Toxicology Branch II in support of a conditional registration of the herbicide Pyridate.

Attachment

# EIGHT-POINT FREE-STANDING SUMMARY FOR PYRIDATE

## 1. Summary of Toxicology Data

| Study | Results | Toxicity Category | Classification |
|---|---|---|---|
| **Pyridate Technical** | | | |
| Acute Oral $LD_{50}$ - Rat | Males & Females: 4690 mg/kg | III | Guideline |
| Acute Dermal $LD_{50}$ - Rabbit | > 2000 mg/kg | III | Guideline |
| Acute Inhalation $LC_{50}$ - Rat | > 4370 mg/$m^3$ | III | Minimum |
| Primary Eye Irritation - Rabbit | Nonirritant | IV | Minimum |
| Primary Dermal Irritation - Rabbit | Moderate Irritant | III | Minimum |
| Dermal Sensitization - Guinea Pig | Sensitizer | | Minimum |
| 90-Day Feeding - Rat | NOEL = 62.5 mg/kg/day<br>LEL = 177 mg/kg/day | | Guideline |
| 90-Day Feeding - Dog | NOEL = 20 mg/kg/day<br>LEL = 60 mg/kg/day | | Guideline |
| 21-Day Dermal - Rat | NOEL > 1000 mg/kg/day | | Guideline |
| Chronic/Onco Feeding - Rat | NOEL = 10.8 mg/kg/day<br>LEL = 67.5 mg/kg/day<br>Not carcinogenic | | Minimum |
| Chronic (1-Year) Toxicity - Dog | NOEL = 20 mg/kg/day<br>LEL = 100 mg/kg/day | | Minimum |
| Carcinogenicity - Mouse | NOEL = 143 mg/kg/day<br>LEL = 714.3 mg/kg/day<br>Not carcinogenic | | Supplementary |

| Study | Results | Toxicity Category | Classification |
|---|---|---|---|
| Teratology - Rat | Maternal NOEL = 165 mg/kg/day<br>Maternal LEL = 400 mg/kg/day<br>Developmental NOEL = 165 mg/kg/day<br>Developmental LEL = 400 mg/kg/day | | Guideline |
| Teratology - Rabbit | Maternal NOEL = 300 mg/kg/day<br>Maternal LEL = 600 mg/kg/day<br>Developmental NOEL > 600 mg/kg/day<br>Developmental LEL > 600 mg/kg/day | | Guideline |
| Three-Generation Reproduction - Rat | Maternal NOEL = 10.8 mg/kg/day<br>Maternal LEL = 67.5 mg/kg/day<br>Reproductive NOEL = 10.8 mg/kg/day<br>Reproductive LEL = 67.5 mg/kg/day | | Minimum |
| Mutagenicity - Ames Test | Nonmutagenic | | Acceptable |
| - Chinese Hamster Ovary | Nonclastogenic | | Acceptable |
| - Cytogenetic Analysis | Nonmutagenic | | Acceptable |
| - Micronucleus Test | Nonclastogenic | | Acceptable |
| - Unscheduled DNA Synthesis | Nonmutagenic | | Acceptable |
| General Metabolism - Rat | Rapidly absorbed, distributed to all tissues, metabolized and excreted in urine - clearance is slower with high dose; major metabolite CL-9673 | | Guideline |
| Formulation | | | |
| Acute Oral $LD_{50}$ - Rat (3.75 EC) | Males & Females: 1258 mg/kg/day | III | Guideline |
| Acute Oral $LD_{50}$ - Rat (45% WP) | Males & Females: 2330 mg/kg/day | III | Guideline |
| Acute Dermal $LD_{50}$ - Rabbit (3.75 EC) | > 2000 mg/kg | III | Guideline |

| Study | Results | Toxicity Category | Classification |
|---|---|---|---|
| Acute Dermal $LD_{50}$ - Rabbit (45% WP) | > 2000 mg/kg | III | Guideline |
| Acute Inhalation $LC_{50}$ - Rat (3.75 EC) | Males & Females: 3282 $mg/m^3$ | III | Guideline |
| Primary Eye Irritation - Rabbit (3.75 EC) | Moderate irritant | III | Guideline |
| Primary Dermal Irritation - Rabbit (3.75 EC) | Slight irritant | III | Guideline |
| Dermal Sensitization - Guinea Pig (3.75 EC) | Sensitizer | | Minimum |

2. Summary of Data Considered Desirable but Lacking for this Action - The registrant has agreed to submit a new mouse carcinogenicity study with Pyridate based on the fact that the originally submitted mouse carcinogenicity study was found to be inadequate for fulfilling the Guidelines requirement. A new study is under way and will be available to the Agency in 1992.

3. Action Being Taken to Obtain the Lacking or Additionally Needed Information - Toxicology Branch II has sufficient information indicating that the new carcinogenicity study in mice has been initiated at Southern Research Institute (March 1989).

4. A Summary of Other Permanent Tolerances Granted for the Herbicide - No permanent tolerances have been approved for Pyridate.

5. The dietary impact for the proposed tolerances (for conditional registration of Pyridate) will be addressed by the Dietary Exposure Branch.

6. The 2-year chronic toxicity/carcinogenicity study in rats with a NOEL of 10.8 mg/kg/day (216 ppm) was used for setting the RfD. The safety factor employed was 100. The tentative RfD is 0.11 mg/kg/day, pending approval by the HED RfD committee.

7. There are no pending regulatory actions against the conditional registration of this pesticide. Full registration of this pesticide will be considered only when an acceptable mouse carcinogenicity study is received by the Agency.

8. Other Relevant Considerations in Setting These Tolerances - None.