DATA EVALUATION RECORD - SUPPLEMENT

XDE-570 (FLORASULAM)

Study Type: *OPPTS 870.3800 [§83-4]; Multigeneration Reproduction Study in Rats*

Work Assignment No. 4-1-128 M (MRID 46808235)

Prepared for
Health Effects Division
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 South Crystal Drive
Arlington, VA 22202

Prepared by
Pesticides Health Effects Group
Sciences Division
Dynamac Corporation
1910 Sedwick Road, Bldg 100, Ste B.
Durham, NC 27713

Primary Reviewer
Michael E. Viana, Ph.D., D.A.B.T.
Signature: _____
Date: _____

Secondary Reviewer
John W. Allran, M.S.
Signature: _____
Date: _____

Program Manager:
Michael E. Viana, Ph.D., D.A.B.T.
Signature: _____
Date: _____

Quality Assurance:
Mary L. Menetrez, Ph.D.
Signature: _____
Date: _____

Disclaimer

This Data Evaluation Record my have been altered by the Health Effects Division subsequent to signing by Dynamac Corporation personnel

EPA Reviewer: Karlyn J. Bailey **Signature:** _____
Registration Action Branch 2, Health Effects Division (7509P) **Date:** _____
Work Assignment Manager: Myron Ottley, Ph.D. **Signature:** _____
Registration Action Branch 3, Health Effects Division (7509P) **Date:** _____

Template version 02/06

DATA EVALUATION RECORD – SUPPLEMENT

See TXR # 0054348 for previous DER

This supplement contains:

- New cover page
- New executive summary

STUDY TYPE: Reproduction and Fertility Effects Study - Rats; OPPTS 870.3800 [§83-4]; OECD 416

PC CODE: 129108 **DP BARCODE:** D331116
TXR#: 0054348

TEST MATERIAL (PURITY): XDE-570 (99.3% a.i.)

SYNONYMS: Florasulam; *N*-(2,6-Difluorophenyl)-8-fluoro-5-methoxy(1,2,4)triazolo (1,5-*c*)pyrimidine-2-sulfonamide; XR-570; XRD-570; DE-570

CITATION: Liberacki, A. B., Carney, E. W. and R. J. Kociba (1997) XDE-570: two-generation dietary reproduction study in CD rats. Health and Environmental Research Laboratories, The Dow Chemical Company, Midland, MI. Laboratory Project Study ID: 960030, November 13, 1997. MRID 46808235. Unpublished.

SPONSOR: Dow AgroSciences Canada, Inc., 2100-450 1 St. SW, Calgary, AB, Canada

EXECUTIVE SUMMARY: In a two-generation reproduction toxicity study (MRID 46808235), XDE-570 (Florasulam; 99.3% a.i.; Lot No. 940714) was administered in the diet to 30 CD (Sprague Dawley) rats/group at dose levels of 0, 10, 100, or 500 mg/kg/day. The P generation parents were dosed for at least 70 days before they were mated to produce the F1 litters. From the F1 weanlings, 30 rats/sex/dose were selected to be parents and were fed the same test diet concentrations as their parents for 70 days prior to mating to produce the F2 litters.

No adverse treatment-related effects were observed on mortality, clinical signs, or gross pathology.

Systemic toxicity was observed at 500 mg/kg. During pre-mating, body weights ($p<=0.05$) and food consumption (not significant [NS]) generally were decreased during Weeks 3-10, resulting in decreased (NS) overall (Weeks 0-10) body weight gains in the F1 males and in the P and F1 females. During gestation, body weights ($p<=0.05$) and food consumption (NS) were decreased during gestation days (GD) 0-21, resulting in decreased ($p<=0.05$) overall (GD 0-21) body weight gains in the P and F1 females. During lactation, body weights were decreased ($p<=0.05$) during lactation days (LD) 1-14; however, food consumption and overall (LD 1-21) body weight gains were not adversely affected.

Additionally at 500 mg/kg/day, relative (to body weight) kidney weights were increased ($p<=0.05$) in the F1 males (incr. 19%) and in the P and F1 females (incr. 18-19%), and very slight multi-focal hypertrophy of the collecting ducts was observed in both sexes in both generations (70-83% treated vs. 0 controls). Since renal toxicity was observed in other studies on this compound, these findings were considered adverse.

The LOAEL for parental toxicity is 500 mg/kg/day, based on decreased body weights, body weight gains, and food consumption, increased relative (to body) kidney weights, and increased incidence of multi-focal hypertrophy of the collecting ducts in both sexes. The NOAEL was 100 mg/kg/day.

No adverse treatment-related effects were observed on birth index, live birth index, or viability indices, clinical signs, developmental landmarks, kidney weights, or gross pathology.

Transient decreases ($p<=0.05$) in the 500 mg/kg/day pup body weights were observed on PND 4 pre-culling (F1 males) and PND 7 (F1 females and F2 males and females); however, by PND 21, all treated groups were similar to controls. These transient decreases were not considered adverse.

The LOAEL for offspring toxicity was not observed. The NOAEL is 500 mg/kg/day.

There were no effects of treatment on any reproductive parameter in either generation, including: estrous cycle length and periodicity; mating, fertility, and gestation indices; and pre-coital and gestation durations.

The LOAEL for reproductive toxicity was not observed. The NOAEL is 500 mg/kg/day.

This study is classified as **acceptable/guideline** and satisfies the guideline requirements (OPPTS 870.3800; OECD 416) for a two-generation reproduction study in the rat.

COMPLIANCE: Signed and dated GLP Compliance, Quality Assurance, and Data Confidentiality statements were provided.