EEB-EC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Simazine (Princep 80W) - Request for the establishment of a temporary tolerance for combined residues of the herbicide simazine (2-chloro-4,6-bis (ethylamine)-s-triazine) and its metabolites 2-amino-4-chloro-6-ethylamino-s-triazine and 2,4-diamino-6-chloro-s-triazine in or on fish at 3.5 ppm.

DATE: August 7, 1973

FROM:

TO: Mr. Lee TerBush, Acting Chief
Coordination Branch
Registration Division

Pesticide Petition No. 3G1394

Ciba - Geigy Corp.
Ardsley, New York 10502

Related Petition: 5F0447

Toxicological Studies:

In his review of pesticide petition 5F0447, 10/18/66, Dr. G. Whitmore stated that the 2 year no-effect level for the rat was 100 ppm and the dog was 1500 ppm. A three generation rat reproduction study also showed a no-effect level of 100 ppm.

Since fish are not generally used in livestock feed residues in meat and milk will not be considered.

Toxicity data submitted with this petition consists of the following:

Acute toxicity of Simazine to:

Mice - Oral LD_{50} >10,000 mg/kg
Rats - Oral LD_{50} >10,000 mg/kg
Rabbits - Oral LD_{50} >10,000 mg/kg

Fish Toxicity:

Mirror Carp - first toxic signs were noticed after 8 hours at 1g/L
Rainbow Trout - Toxic signs after about 4-8 hours at a concentration of 0.1g/L.
Bluegill - Concentrations in small test ponds of up to 5 ppm caused no noticeable effect when held in this concentration for a period of 7 weeks. Terbutryn, the positive control, killed small bluegill at a concentration of 5.0 ppm.
Bluegill and Channel Catfish - LC_{50} values for Princep 80W were greater than 1000 ppm for both species at all intervals up to 96 hours after initial exposure. Ametryne had an LC_{50} of 8-18 ppm for bluegill and 11 ppm for catfish.

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Fathead Minnows - No effect level of simazine after 96 hours exposure was 2.5 ppm.

Oysters - Simazine at 1.0 ppm does not inhibit shell growth nor caused any mortality. DDT caused 50% reduced shell growth at 0.24 ppm and 35% mortality at 0.5 ppm.

Pink Shrimp and Mud Crab - The no-effect level for Pink Shrimp was 75 mg/L and 1000 mg/L for Mud Crab after 96 hours of contact with simazine.

Mice - A single dose was given, via stomach tube, to mice weighing 15-19 g and then observed for 8 days. The predominant sign was drowsiness and no mortalities were obtained at 5000 mg/kg, the highest level given.

Conclusions:

The data submitted with this and previous petitions suppout the safety of this material. According to Lehmans per Capita consumption chart only 0.72% of the diet is fish. At the requested tolerance of 3.5 ppm an individual would obtain 0.038 mg of simazine. Based on the two year rat data a 60 kg man could safely support 3.0 mg. Petitioner claims that the experimental label restriction for drinking water eliminates need for Food Additive tolerance in potable water.

TB therefore, pending the findings of CB, finds this temporary tolerance in fish safe and recommends that it be established as requested.

Robert P. Schmidt 8/8/73

Robert P. Schmidt, D.V.M.
Toxicology Branch
Registration Division

cc: CB
EEB
Division Reading File
Branch Reading File
PP# 3G1394

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Init:CHWilliams

8/8/73