

7/17/73 - Written

8/2/73 - Typed

Environmental Chemistry Review of Methylene bis(thiocyanate)  
Reg. No. 4643-EXP Chemed Corporation, Dearborn Chemical Div.

## I. Introduction

1. This is the first review for this chemical.
2. Product name is Dearcide 709. A bacteriostat and algicide for the control of the growth of microorganisms (Bacteria and algae) in industrial and commercial recirculating cooling towers.

## II. Directions For Use

Apply 6.2 to 12.4 fl oz. per 1000 gal. (50 to 100 ppm) of water system. Repeat until control is achieved. Subsequent dose, 3.1 to 6.2 fl. oz. per 1000 gal (25 to 50 ppm) of water in the system once per week or as needed to maintain control. Feeding should be fed out full strength in the cooling tower basin at a point of point of maximum water circulation. Tower bleedoff valves should be closed to permit a retention time of 4 hours.

Treated effluent should not be discharged where it will drain into lakes, streams, ponds, or public water.

Water treated with Dearcide 709 should not be used for food processing, invigoration or in the manufacture of paper used for food packaging.

## III. Discussion Of Data

1. No data submitted.

## IV. Recommendation

A. RL registration. We need evidence that the label restriction controlling the treated effluent is practicable.

B. The following type environmental data will be needed if the label restriction controlling the treated effluent is not practicable:

### 1. Laboratory studies using radiolabeled material.

a. Hydrolysis study at pH 5, 7, and 9 at 20°C for a period of 4 weeks or until 75% of parent compound is hydrolyzed. The percentage of parent compound and its major degradation products are needed.

b. Photodegradation study in water at a pH of maximum stability. The percentage of parent compound and its

major photodegradation products are needed. Water temperature should be around 20°C and not to exceed a depth of 6 inches. Study is to continue until 1/2 of the parent compound is photodegraded or for 1 week.

- c. A fish residue study is needed. See enclosures.
- d. An adsorption study using water and silt is needed to determine the adsorption factor of the chemical between the two phases.

2. Actual use study

- a. Analysis for the amount of chemical and/or its degradation products actually discharged under typical use conditions.

3. If the chemical and/or its degradation products accumulate in fish, the following studies may be needed:

- a. Effects, if any, of various COD/BOD levels should be determined.
- b. Dissipation curves of the chemical on bottom and suspended sediment.
- c. Residue analysis on fish and shellfish.

Put send out pages V-37 and V-38 of guidelines (fish study).

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