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Via Federal Express

Document Processing Center (Mail Code 7407M)  
Room 6428  
Attention: 8(e) Coordinator  
Office of Pollution Prevention and Toxics  
U.S. Environmental Protection Agency, ICC Building  
1201 Constitution Ave., NW  
Washington, DC 20004



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Dear 8(e) Coordinator:

Mixture containing Diglycolamine (CAS#929-06-6) [ ]; Hydroxylamine 50% (CAS#7803-49-8) [ ]; Gallic acid (CAS#149-91-7) [ ]; Water (CAS#7732-18-5) [ ]; 1-Aminopropan-2-ol (CAS#78-96-6) [ ]; Monoethanolamine (CAS#141-43-5) [ ]; Catechol (CAS#120-80-9) [ ]; Diethylene glycol (CAS#111-46-6) [ ]; Diethanolamine (CAS#111-42-2) [ ]

This letter is to inform you of the results of an acute oral and acute dermal toxicity studies with the above referenced test mixture.

Acute Oral Toxicity:

The test mixture was administered in a 20% aqueous solution by oral gavage to three groups of five male and five female Sprague-Dawley rats at doses of 2.0, 1.5, or 1.2 g/kg of body weight. The surviving rats were observed for 14 days after test substance administration.

Mortality incidences in the 2.0, 1.5, and 1.2 g/kg dose groups were 9/10, 5/10, and 3/10, respectively. The acute oral median lethal dose (LD<sub>50</sub>) of the test mixture in male and female rats was calculated to be 1.43 g/kg with 95% Confidence Limits of 1.05 to 1.95 g/kg. All deaths occurred on the day of dosing except 4 rats on day 8 and 1 rat on day 12 were found dead in 2 g/kg group. Hypoactivity, cyanosis, convulsions, and prostrate posture were observed in rats in all groups. Hydroxylamine has been reported to cause cyanosis<sup>1</sup>. Salivation was observed in rats dosed at 1.2 or 2.0 g/kg. Tremors were observed in a single rat dosed at 2.0 g/kg. At 1.2 g/kg – cyanosis observed in all rats on the day of dosing and in surviving animals up to 2-3 days; 6 animals had convulsions on the day of dosing (3 died); 3 had prostrate posture on the day of dosing (2 died); at 1.5 g/kg - cyanosis observed in all rats on the day of dosing and in surviving animals up to 5 days; hypoactive was observed in one rat on the day of dosing; 3 animals had convulsions on the day of dosing (2 died); prostrate was observed in 4/5 found dead rats on the day of dosing; and at 2 g/kg – convulsions on the day of dosing in 3 moribund rats; cyanosis observed in all rats on the day of dosing and in surviving animals up to 8 days.

Acute Dermal Toxicity:

The test mixture was applied undiluted to the shaved backs of five male and five female adult New Zealand White rabbits at dose of 2 g/kg of body weight. Doses of 1.5 and 1 g/kg were similarly applied due to mortality in the 2 g/kg group. The test sites were wrapped and the test substance was left in contact with the skin for 24 hours. Residual test substance was removed from the application sites by rinsing with Milli-Q water and wiping with gauze. All surviving rabbits were observed during the 24 hours following treatment and for 13 days thereafter.

Death occurred in 9/10 (day2-3), 5/10 (day 3), and 2/10 (day4-6) in the rabbits dosed at 2, 1.5, and 1 g/kg, respectively. The acute dermal median lethal dose (LD<sub>50</sub>) of the test mixture in male and female rabbits was calculated to be 1.37 g/kg with Confidence Limits of 0.95 to 1.99 g/kg.

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Cyanosis<sup>1</sup> was observed in all animals at all doses, while hypoactivity was observed in all rabbits at 2 g/kg, 1.5 g/kg, and majority of rabbits at 1 g/kg animals. These clinical signs were observed up to 3 days. Other clinical signs observed in the 2 g/kg group consisted of ataxia and prostrate posture on day 2 or 3. Necrosis was observed on the application site of all animals, and persisted in some animals through study termination (Day 14). Edema was observed on the application site of the majority of the 2 g/kg, 1.5 g/kg, and 1 g/kg animals and cleared by Day 7.

Sincerely,

<sup>1</sup> R.E. Gosselin et al., *Clinical Toxicology of Commercial Products*, Williams & Wilkins, 5th Edition, 1984