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DIETHYLCARBAMOYL CHLORIDE (DECC)



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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
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In a May 5, 1976 letter, Dr. Norton Nelson, Professor and Chairman of the Institute of Environmental Medicine, New York University Medical Center, informed the Director of the National Institute for Occupational Safety and Health (NIOSH) of the mutagenic potential of diethylcarbamoyl chloride (DECC).

A study conducted by Dr. Frank Mukai (Institute of Environmental Medicine, New York University Medical Center), has shown DECC to be mutagenic in two E. coli strains (WP2 and WP2S from Witkin). However, DECC was not as mutagenic as its close analog, dimethylcarbamoyl chloride (DMCC). (DMCC has carcinogenic potential in laboratory rodents by subcutaneous and intraperitoneal injection and by inhalation, as reported in the NIOSH Current Intelligence Bulletin on dimethylcarbamoyl chloride).

Annual production of diethylcarbamoyl chloride (DECC) in recent years has been less than 15,000 pounds. The only known commercial domestic use of DECC is in the synthesis of the pharmaceutical diethylcarbamazine citrate, an anthelmintic (worming agent), produced and marketed under the trade names Hetrazan and Caricide by Lederle Laboratories, a division of American Cyanamid.

NIOSH

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