

injection on the bellies of rabbits, are comparable to those of ethyl crotonate and dimethyl phthalate. It is as irritating to the corneas of rabbits as ethanol and about one twentieth as irritating as ethyl crotonate. Concentrations of ethyl acrylate vapors of 4000, 2000, and 1000 p.p.m. killed all of six, five of six, and none of six rats respectively in four hours. Saturated vapors, concentration 50,000 p.p.m. killed all of six in fifteen minutes, and none in five minutes. Rabbits and rats suffered lung damage and secondary effects in liver and kidneys from repeated 30 day exposures to a concentration of ethyl acrylate of 300 p.p.m. Rats were not significantly affected by a 30-day exposure to 70 p.p.m. ethyl acrylate. These findings suggest a hygienic standard for repeated human inhalation of ethyl acrylate vapors of not above 50 p.p.m.

-- Condensed from Authors' Summary

- 85 The Toxicity of Methyl and Ethyl Acrylate. J.F. Treon, H. Sigmon, H. Wright, and K.V. Kitzmiller. J. Ind. Hyg. & Toxicol. 31, 317-326 (Nov. 1949).

Animal experiments lead to the tentative conclusion that men may breathe air containing concentrations of the order of 75 p.p.m. (0.26mg. of methyl acrylate per liter or 0.30 mg. of ethyl acrylate per liter at 25°C and 745 mm. of mercury) for periods of several hours per day without any considerable likelihood of injurious effects. This presumption should be accepted cautiously in practice and careful medical supervision should be maintained until the facts with reference to human susceptibility can be established.

-- Condensed from Authors' Summary

- 86 Fatality and Illness Caused by Ethylene Chloride in an Agricultural Occupation. A.F. Bush, H.K. Abrams, and H.V. Brown. J. Ind. Hyg. & Toxicol. 31, 352-358 (Nov. 1949)

(1) Ethylene chlorhydrin is now widely used in rural areas to hasten the germination of seed potatoes. (2) This chemical recently caused the death of one and the illness of five persons who were engaged in this occupation. The clinical and autopsy findings are given. (3) Ethylene chlorhydrin is a potent poison with special effects on the nervous, hepatic, renal and vascular systems. It is absorbed readily through skin, intestine and respiratory tract. (4) The maximum allowable concentration should be lowered to 2 p.p.m. in atmosphere, and no contact with the skin should be permitted. (5) A method of safely applying ethylene chlorhydrin to potatoes is described. (6) Mechanical ventilation is recommended for all treatment chambers. Five hundred continuous air changes seem necessary before a chamber is opened. The ventilation should "remain on" during unloading. (7) Proper health control should include medical examinations and engineering controls.

-- Authors' Summary

- 87 The Retention of Methallyl Chloride and Methyl Bromide by Fumigated Grain. N. Van Tiel J. Hygiene 46, 431-433 (Dec. 1948).

While the toxic properties of methyl bromide are greater than those of methallyl chloride it is more volatile and evaporates more rapidly from grain that has been fumigated by it. However, there was no mortality in groups of rats that were fed for six and one-half weeks on grain that had been fumigated by these substances. There were no significant differences