

- 219 Determination of Trichloroethanol in the Urine. J. Teisinger, V. Styblova, and V. Vlachova. Pracovní Lékarství 7, 258-260 (1955). Bohemian.

Internal and neurological examination of 41 persons working in an atmosphere containing 0.080-0.370 mg. trichloroethylene per liter did not reveal any definite relation between the amount of excreted trichloroacetic acid and the clinical picture. Most of the workers (33) excreted 1.5 to 7.5 times more trichloroethanol than trichloroacetic acid.

-- Chem. Absts.

- 220 Neurological Examination of Workers Handling Trichloroethylene. V. Styblova. Pracovní Lékarství 7, 260-263 (1955). Bohemian.

Examinations of 118 workers failed to detect a direct relation between the amount of trichloroacetic acid in the urine and the degree of health damage; however, the direct dependence of the neurological picture on the length of exposure to trichloroethylene was evident.

-- Chem. Absts.

- 221 Biochemical Explanation of Intolerance to Alcohol in Trichloroethylene Intoxication. Z. Bardoděj, Marie Krivucova, and F. Pokorný. Pracovní Lékarství 7, 263-267 (1955). Bohemian.

The abnormal response to ethyl alcohol in workers handling trichloroethylene, manifested by peripheral dilatation, fall of blood pressure, tachycardia, tachypnea, and dyspnea, is caused by the inhibition of the oxidation mechanisms of the organism by the metabolism of trichloroethylene. Its course closely resembles that of acetylcholine reaction. Persons exposed to vapors of trichloroethylene showed increased acetaldehydemia in the blood following administration of alcohol, thus revealing an analogical reaction with the intolerance phenomenon after tetraethylthiuram disulfide. A similar picture was produced by alcohol in combination with chloral hydrate. It is presumed that the oxidation both of chloral hydrate and trichloroethylene, and the metabolism of trichloroethylene leading to the formation of chloral hydrate as an intermediary product, inhibits the liver aldehyde dehydrogenase. Tetraethylthiuram disulfide increases the toxic manifestations in dogs inhaling trichloroethylene, while in rabbits the difference is hardly perceivable. The alcohol test is recommended as a means of controlling the physical fitness of workers handling trichloroethylene.

-- Chem. Absts.

- 222 Antidote Effects against Experimental Carbon Disulfide Poisoning. A. L. Yudeles and R. V. Bessarabova. Farmakol. i Toksikol. 18, No. 3, 50-52 (1955). Russian.

In mice, given carbon disulfide in sunflower-seed oil subcutaneously, LD₁₀₀ is about 0.1 ml. Survival time rises from one to three hours when 0.008 mg. procaine is injected 30 minutes before the carbon disulfide. When either sodium bromide (1.2 mg.) or caffeine (0.2 mg.) was given in advance, 2/3 of the mice survived the otherwise fatal dose. The antidote effect is evidently exerted via the cerebral cortex and may be applicable to other industrial poisons of the cortical narcotic type.

-- Chem. Absts.

- 223 The Toxicity of Certain Aromatic Phosphate Esters. J. F. Treon, F. P. Cleveland, and J. Cappel. Wright Air Development Center Tech. Rept. 54-345. 69 pp. (1955).

Animal experiments with seven commercial grades of tritolyi phosphate showed them to be moderately toxic, but less so than pure tri-o-tolyi phosphate when administered by stomach tube. The commercial tritolyi phosphates readily penetrate the skin of rabbits, causing death when sufficient quantities are applied. All of these phosphates yielded cumulative effects when applied in spaced multiple doses. Differences between individual grades are discussed. Xylenol phosphates are somewhat less toxic than tritolyi phosphate. The saturation of air with the vapor of commercial tritolyi phosphates at ordinary temperatures is not likely to result in hazard. Respiratory exposure to a mist or spray of these materials, on the other hand, may well be highly hazardous under suitable conditions. Toxic concentrations of vapor may be reached when the compounds are subjected to elevated temperatures. The compounds decompose at temperatures above 566° and the toxicity of the resultant mixture of the materials in the atmosphere depends largely on the extent to which the original