

a dynamic system of known initial concentration, as functions of adsorbent bed depth and air detention time within the filter bed. The odor control performance of carbon-loaded rayon monofilaments depends on the type and proportion of activated carbon used. The filter efficiency in turn determines the rate of odor reduction in a closed space and the ultimate or equilibrium concentration when odorant generation and removal occur simultaneously. Four types of filters were evaluated: rayon loaded with air- or water purification carbon, granular air-purification carbon, and open-lattice commercial filters. Air laden with synthetic tobacco malodor was streamed through successive increments of adsorbent bed. It was possible to estimate adsorption efficiencies and, by repeating the measurements after various degrees of carbon saturation, to construct adsorption waves. It was found that air-purification carbon was superior to water-purification carbon for loading in the rayon filaments, and that all the rayon-carbon compositions were much superior to the commercial open-lattice filters. -- APCA Absts.

791 A Study of Air Pollution Carcinogenesis. II. Carcinogenic Activity of Gasoline Engine Exhaust Condensate. E. L. Wynder and D. Hoffman. *Cancer* 15, 103 (1962).

A benzene extract of gasoline engine exhaust "tar" (see *Cancer* 15, 93 (1962)) was painted 3 times per week for 15 months on the backs of Swiss mice, in concentrations of 50, 33, 25, 10, and 5% in acetone. Cigarette smoke concentrate, similarly dissolved in acetone, was also painted on mice, in order to compare potency of tumor induction. Animals painted with the 50% tar/acetone solutions received approximately 0.85 gm. per month of engine exhaust tar or 0.9 gm. per month of cigarette condensate. The engine exhaust tar proved to be about 1 1/2 to 2 times as active as cigarette condensate, in terms of total papillomas and carcinomas developed at each concentration. Since the concentrations of known carcinogens in the tar was 50-100 times higher than in the condensate, the possible presence of the anti-carcinogens is suggested. -- J. Occ. Med. Absts.

MANAGEMENT ASPECTS

792 Consequences of Age Standardisation Procedures for Statistics of Sickness Absence in Industry. M. J. W. DeGroot and F. van Leeuwen. *Ind. Med. & Surg.* 31, 263-271 (June 1962).

This publication presents a comparison of the direct and indirect method of standardisation. An analysis is made of the quantitative differences of age standardisation applied on absentee data of 93 plants participating in the Diagnosis Statistics of the Netherlands Institute for Preventive Medicine at Leyden, Netherlands. From this analysis the conclusion is drawn that the indirect method of standardisation is to be preferred. The advantage of this method is more pronounced when some classes are undermanned or even empty. -- Authors' summary

ACCIDENTS AND PREVENTION

793 Use Solvents? Watch for these 5 Hazards. H. H. Fawcett. *Occ. Hazards* 24, 29-31 (July 1962).

When solvents and electrical equipment get together, the safety man must thwart these potential hazards: (1) Fire. (2) Toxicity. (3) Skin Trouble. (4) Chemical Reactions. (5) Effects on Plastic and Insulation. Among commonly used solvents, benzene, acetone, gasoline, and ether are all highly inflammable; On the other end of the scale are nonflammables, such as carbon tetrachloride and the Freons. High flash points does not mean freedom from fire.