

501 Studies of Analytical Methods for Lead-in-Air Determination and Use With an Improved Self-Powered Portable Sampler.

A. L. Linch, R. B. Davis, R. F. Stalzer, and W. F. Anzilotti.
Am. Ind. Hyg. Assn. J. 25, 81-93 (Jan.-Feb. 1964).

The portable "Uni-Jet" Lead-In-Air Analyzer was revised to provide constant rate collection of tetraethyl (TEL) and tetramethyl lead (TML). Reliable results from monitoring leaded gasoline storage tanks, cleaning and decontamination procedures, were obtained by drawing a two-cubic-foot sample during 20 minutes through methanolic iodine. The aspirating unit powered by non-flammable "Freon-12" has been used widely in fire and explosion hazard areas. -- Authors' abst.

502 Some Theoretical Considerations in the Microchemical Detection of Airborne Toxic Chemical Agents. L. J. Hillenbrand, Jr., et al. Microchem. J. 7, 78-88 (May, 1963).

The increasing use of toxic phosphonates, thiophosphonates, phosphates, and carbamates as pesticides, insecticides, corrosion inhibitors, and antiknock compounds has shown the desirability of developing highly sensitive detector devices for use in industry, agriculture, food distribution centers, and the home. This paper deals with some theoretical considerations in microchemical detection of toxic chemical agents, in the form of aerosols or gases, in the absence of concentration or sampling devices. It appears that, even if the kinetics of a stoichiometric reaction between toxic gases or aerosols and porous solid detectors is assumed to be adequate, a sufficient amount of reaction to produce visible color in seconds will be possible only in regions of very high air flow velocities. -- Public Health Eng. Absts.

PREVENTIVE ENGINEERING

503 Experimental Verification of Ventilation Equations. T. W. Kethley and W. B. Cown. Am. Ind. Hyg. Assn. J. 25, 67-68 (Jan.-Feb. 1964).

The authors have verified experimentally the theoretic equations for the rate of dispersion or removal of a contaminant by a known rate of air flow relative to chamber volume. They also verify equations for calculating concentrations and exposures from intermittent sources of contamination. -- Authors' abst.

504 Humidity Studies and Respiratory Infections in a Public School. J. Sataloff and H. Menduke. Clin. Pediat. 2, 119-121 (March, 1963).

The present pilot study was initiated to explore the possibility of altering the frequency of upper respiratory infections in school children by increasing the amount of moisture in classroom air during the winter months, while heating units are turned on. No reduction in respiratory illness could be demonstrated under the circumstances of the experiment, but this does not disprove the benefit of physiologic temperature and humidity conditions in guarding the health of school children. With so many environmental factors beyond the reach of this experiment—clothing, home conditions, weather, epidemics, etc., — it would be unrealistic to expect any substantial difference in student health solely from the use of humidifiers in school rooms. This study of air humidification in schools serves to stimulate curiosity concerning what results might be encountered if both schools and homes could be more scientifically "air conditioned" in the winter time. -- Am. Rev. Resp. Dis. Absts.

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