

COMMUNITY AIR HYGIENE

- 779 Air Pollution Research. V. Malinoski. *Am. J. Nursing* 62, 64-67 (Jan. 1962).
(*American Journal of Nursing*, 10 Columbus Circle, New York 19; N. Y. 9).

The role of the public health nurse, and the techniques used, are emphasized in winning community cooperation specifically as they applied in two community surveys conducted by the U.S. Public Health Service to study the effects of air pollution on health. In the first study in Nashville, Tennessee, three phases were undertaken: a preliminary survey of pulmonary function in a group with known cardiorespiratory disabilities, a continuing survey of adults and children with asthma, and a morbidity survey employing interviewers. The second survey was made in New Florence and Seward (control group) in western Pennsylvania, about 100 miles from Denira, where the acute episode in air pollution occurred in 1944. In the current survey about 85 % of adults 30 years and over were interviewed and were offered extensive pulmonary testing and a large-sized chest x-ray.

-- APCA Abstr.

- 780 The Determination of Gravimetric Pollution Concentrations by Means of Filter Papers.
E. Kemény. *J. Air Poll. Control Assn.* 12, 218-241 (June 1962).

Conversion factors were determined by means of an electrostatic precipitator, in order to convert pollution concentrations expressed as a photometric unit (22) 5/3 per m³ into concentrations expressed as micrograms per cubic meter. The calibration experiments resulted in values ranging from 4.1×10^3 to 43.3×10^3 . The reason for the fluctuations was found in the deposit collected consisting of a mixture of smoke and soot (small man-made particles) and dust (larger particles of natural origin). The second component proved to be largely dependent on variations in wind speed and was the main cause of the fluctuations. By separating these two factors it was possible to obtain values for the variation of man-made pollutants (smoke and soot) with the cycle of the seasons.

-- Author's summary

- 781 Analysis of Air Pollution Mixtures: A Study of Biologically Effective Components.
Frances L. Estes. *Anal. Chem.* 34, 996-1001 (July 1962).

The biological effectiveness of an oxidant-type air pollution mixture was determined from the inhibition in growth of *E. coli* following exposure to the pollution mixture. Absorption in phosphate buffer and adsorption on a column of C-22 Firebrick coated with 20% (w./v.) disodium phosphate appeared to remove completely the effective components. Both agents removed a part of the oxidant material as determined by the phenolphthalein method. The material absorbed in the phosphate buffer markedly inhibited the oxygen consumption of leukocytes exposed to it. The buffer completely removed the as yet unidentified 302-millimicron absorbing material. However, the apparent concentration in the buffer did not correspond to the apparent concentration in the gas. The data suggested that the 302-millimicron absorbing material contained a biologically effective agent, which might be peroxovanadyl nitrate.

-- Author's abst.

- 782 Storage of Vapors and Gases in Plastic Bags. A. P. Altshuler, A. F. Warburg, I. R. Cohen and S. F. Alleva. *Intern. J. Air and Water Poll.* 3, 73-81 (Jan.-Feb. 1963).

The results available indicate that plastic bags serve as excellent reservoirs for synthetic mixtures to be used in the calibration of various instruments or chemical methods. Low concentrations of automobile exhaust diluted with air either before or after irradiation appear fairly stable in plastic bags for limited periods of time. Bags are likely to be unsatisfactory for many of the more reactive organic and inorganic species in combustion sources such as formaldehyde, nitrogen dioxide, and sulfur dioxide. Plastic bags of Scotchpak are satisfactory.

* Address not in current List of Periodicals.