

ENVIRONMENTAL MEASUREMENTS

- 1202 Evaluation of a Visual Color Comparator Method for Determination of Atmospheric Nitrogen Dioxide. S. Hochheiser and G. A. Rodgers. *Environ. Sci. Technol.* 1, 75-76 (January, 1967)

The performance data of a visual color comparator for NO₂ determination was compared with data obtained from a spectrophotometer. The color comparator was found suitable for analyses of liquid samples containing more than 1 and less than 7 micrograms of NO₂. Four references are given.

-- Public Health Eng. Absts.

- 1203 Comparison of Methods for the Determination of Benzo(a)pyrene in Particulates From Urban and Other Atmospheres. E. Sawicki, et al. *Atmospheric Environ.* 1, 131-145 (January, 1967)

Some of the factors compared are precision, accuracy, man-hours of work and total analysis time. Specific recommendations are given for methods by means of which a high order of selectivity, a maximum amount of information, a considerably reduced analysis time, or a low cost of analytical operation are possible. The use of the relatively low cost fluorimetric procedure is achieved with the loss of simultaneous characterization. There are 20 reference

-- Abst. cond., Public Health Eng. Absts

- 1204 Determination of Trace Amounts of Organic Lead in Air. Composite Sample Method. L. J. Snyder. *Anal. Chem.* 39, 574-578 (May, 1967).

The method consists of collecting a large air sample (100 to 200 cu.m.) by passing it through an activated carbon scrubber for a period of 2 to 4 days. Organic lead collected in the activated carbon is decomposed, extracted from carbon and colorimetrically measured by a single extraction dithizone method. Interference from particulate lead is eliminated by effective filtration prior to collecting organic lead. Eight references are given.

-- Abst. cond., Public Health Eng. Absts

PREVENTIVE ENGINEERING

- 1205 Hazards of Hyperbaric Chambers. W. G. Trapp. *Can. Med. Assn. J.* 97, 227-228 (July 29, 1967).

Recent fire accidents in simulated space vehicles have raised the question of similar hazards in a hyperbaric chamber. A variety of factors markedly reduces the risk of working in a hyperbaric chamber; among these are sprinkler systems and the fact that the chamber itself is filled with compressed air. The patient receives pure oxygen through a closed system and expired oxygen is removed from the breathing system by a separate suction. Any escaping oxygen is washed out of the chamber by large-volume ventilation. Faithful adherence to decompression regulations has successfully prevented any symptoms of the "bends" due to exposure to compressed air. Toxic effects of pure oxygen under pressure have been much lower than anticipated as long as the pressurization has been kept below 3 atmospheres absolute.

-- Author's summary

COMMUNITY AIR HYGIENE

- 1206 Some Constituents of City Smoke. G. R. Clemo. *Tetrahedron* 23, 2389-2393 (May, 1967).

An interest in the complementary action of cigarette smoke and the neutral constituents of city smoke prompted this study of the isolation and identification of the aromatic hydrocarbons collected on cotton filters through which air had been drawn for 10-12 weeks. Chromatography on an alumina column of the neutral portion of the atmospheric soot which had been eluted from the cotton filters with a light petroleum gave a number of nitrogen-free hydrocarbons from which the crystalline 1, 3, 5-trinitrobenzene complexes were prepared. Identification was based on infrared, ultraviolet, and mass spectrometry as well as on the melting points. Pyrene, 3-methylpyrene, 1, 2-benzpyrene, triphenylene, chrysene, 1, 12-benzperylene, and picene were isolated and identified. The 3, 4 benzpyrene was identified, but