## ENVIRONMENTAL MEASUREMENTS

268 Colorimetric Determination of Carbon Monoxide in Air by an Improved Palladium Chloride Method. T. H. Allen and W. S. Root. J. Biol. Chem. 216, 309-317 (1955).

Christman's method of analyzing carbon monoxide in air by the reduction of palladium chloride was extensively improved so that it is suitable for use in physiological experiments. With samples of less than 100 cc. it is possible to analyze samples ranging in CO content from 94.2 to 0.010% or even less, with a recovery of 99.6% and a standard deviation of 2.21%. The lowermost limit of the method, which has not been approached, is determined by the accuracy with which the least quantity of palladium chloride can be accurately measured by spectrophotometry of palladium iodide solutions. -- Chem. Absts.

269 An Improved Palladium Chloride Method for the Determination of Carbon Monoxide in Blood. T. H. Allen and W. S. Root. J. Biol. Chem. 216, 319-323 (1955).

An improved palladium chloride method for the determination of carbon monoxide in 0.2 to 1.0 cc. of blood is described. The results agree well with those obtained with a precise gasometric method. -- Chem. Absts.

270 Methods for the Detection of Toxic Gases in Industry. No. 10. Chlorine. (Revised.) Great Britain, Department of Scientific and Industrial Research. 6 pp. (1955). Obtainable from British Information Service, 30 Rockefeller Plaza, New York 20, N. Y. 20 cents.

The original leaflet was published in 1939. In this revised edition the sections on occurrence, poisonous effects, and first aid have been rewritten, but only minor amendments have been made to the sections dealing with the method of detection.

-- Cond. from Bull. Hyg.

271 Lead in Blood. A Rapid Method for Spectrochemical Analysis. Kathleen Kumler and T. P. Schreiber. Am. Ind. Hyg. Assn. Quart. 16, 296-300 (Dec. 1955).

Spectrographic methods that have been previously described give good correlation with chemicals, but are time-consuming. In a new method, which is fully described, the speed is increased by the following factors: the use of partially oxidized blood, the presence of nitrogen in the analytical arc gap, and a narrow (10 micron) entrance slit. In addition, the possibility of contamination has been greatly reduced. This results from the electrode loading technique and the need of very few reagents for the analysis. The accuracy and reproducibility of the method are good.

272 The Determination of Mercury in Urine—Single Extraction Method. E. E. Campbell and B. M. Head. Am. Ind. Hyg. Assn. Quart. 16, 275-279 (Dec. 1955).

Mercury is determined by the mixed color method using dithizone; interfering elements are eliminated by complexing with versene and by pH control. The published ashing techniques have been studied in conjunction with the single extraction method. Careful oxidation of urine with potassium permanganate and sulfuric acid is recommended. The sensitivity of the method is 1 microgram of mercury with an accuracy of 94.2 ± 4.82%. The advantage of this procedure is the speed of analysis; and purification of the reagents is unnecessary. -- Editor's summary