

which results in the formation of a pink color. This reaction is sensitive to 0.005 ppm, if the color is read in a Beckmann spectrophotometer, Model DU. The standard deviation was determined for chromium concentrations ranging from 0.02 to 0.32 ppm, and found to be 0.005 ppm, when 10-ml blood samples were used.

-- Authors' Summary

- 1027 Spectrochemical Determination of Lead in Small Quantities of Blood.
H. Murata. J. Chem. Soc. Japan., Pure Chem. Sect., 72,
863-865 (1951).

Lead in small quantities of liquid, such as blood or urine, was determined by an intermittent a.c. arc method with bismuth as the internal standard. The lines used were Pb 2833 and Bi 2898 Å. The sample (0.02 cc) was placed on the flat end of a carbon electrode heated to 70°C., evaporated, and heated to 110°C. and the arc was ignited. The standard solution contained 0.1-1000 gamma per cc. lead and 300 gamma per cc. bismuth. One gamma per cc. lead was determined. The continuous d.c. arc and spark method did not give good results. About 30 gamma of lead was found in 10 cc. of the blood of healthy Japanese persons by this method. This value is higher than the value determined by the dithizone method.

-- Chem. Absts.

- 1028 Polarographic Procedure for Urinary Thallium. G. S. Winn,
Edna L. Godfrey, and K. W. Nelson. Arch. Ind. Hyg. & Occ. Med.
6, 14-19 (July 1952).

Urine specimens are digested with a sulfuric-perchloric-nitric acid mixture. The residues are transferred to separatory funnels, and the thallium is oxidized with bromine water. The resulting thallic ion is extracted, in acid solution, with dithizone in chloroform. Lead remains in the aqueous phase. The chloroform solutions are evaporated and digested with the sulfuric-perchloric-nitric acid mixture, the remaining sulfuric acid being removed in a muffle furnace. The resulting residues are taken up on ammonium acetate solution and polarographed. When compared with a standard curve the wave heights so obtained indicate the quantities of thallium present. The standard curve is prepared by adding known quantities of thallium to urine, analyzing in the described manner, and plotting wave heights against thallium concentrations.

-- Authors' Summary

- 1029 Infrared Determination of Chlorinated Hydrocarbon Vapors in Air.
P. F. Urone and Mary L. Druschel, Anal. Chem. 24, 626-630
(April, 1952).

Because of the toxicity of chlorinated hydrocarbon vapors in air, their analysis is of importance. Infrared spectroscopy has a