

separation of the mercury by a dithizone extraction, liberation of mercury vapor by the destructive distillation of the mercury dithizonate, and estimation of the mercury by use of an ultraviolet light mercury vapor meter. Only one milliliter of blood is required for a determination. The method is suitable for the milli- and centi-microgram range, that is, for 10^{-9} to 10^{-9} gram of mercury.

-- Authors' summary

- 146 Extraction and Flame Spectrophotometric Estimation of Thallium in Urine. W. B. Stavinocha and J. B. Nash. *Anal. Chem.* 32, 1695-1697 (Nov. 1960).

An assay of thallium in urine by flame spectrophotometry by use of an organic solvent extraction with 2-octanone has been developed. After wet ashing of the urine sample, thallium is extracted with 2-octanone from a 1 M hydrobromic acid solution. The 2-octanone is then washed with hydrobromic acid solution (1 M) and aspirated directly into the flame. Known amounts of thallium added to urine samples were recovered satisfactorily by this method.

-- Authors' abst.

- 147 Survey of Lead Hazard in Indoor Firing Ranges. C. R. Ross, J. P. Windish, L. DuBois, J. L. Monkman and A. J. DeVilliers. *Am. Ind. Hyg. Assn. J.* 21, 256-260 (June 1960).

Air-borne lead in firing ranges is generated in 3 ways: by combustion of the lead compounds usually found in priming compositions, by abrasion of the bullet when it leaves the gun, and by fragmentation of the bullet when it strikes the target or backstop. High air-borne lead concentrations were found and studies of the lead hazard were made at 6 ranges. As a result of the findings an environmental survey was carried out. The survey consisted of the measurement of air concentrations of lead during firing practice, analysis of settled dust samples for lead, and ventilation measurements. Lead analyses of air samples were made by a polarographic technique. Urine samples were analyzed by a modification of one of the dithizone methods.

-- APCA Absts.

- 148 Tetraethyl Lead Poisoning Incident with Eight Deaths. E. E. Morrill. *Am. Ind. Hyg. Assn. J.* 21, 515-517 (Dec. 1960).

This paper concerns a tetraethyl lead poisoning incident at the U. S. Army Koshida POL (Petroleum, Oils and Lubricants) Terminal near Yokohama, Japan. A private company under contract for the cleaning of several petroleum tanks had 23 of its employees enter various Japanese hospitals between August 23 and September 10, 1958 following the completion of cleaning a tank which contained 115/145 aviation (leaded) gasoline. During the period August 26 to September 3, 1958, 8 of these persons died, including the contractor. This tragic accident did not come about because of the lack of adequate means for protection, but primarily because of the lack of constant and competent supervision which must be provided at all times for tank cleaning work of this nature. Other similar incidents in the military services during the past few years where there have been fatalities, near-fatalities, and serious illnesses from tetraethyl lead exposures make competent supervision mandatory for these operations.

- 149 A New Spectrophotometric Procedure for the Microdetermination of Methyl Chloride. Margaret Redford-Ellis and J. E. Kench. *Anal. Chem.* 32, 1803-1807 (Dec. 1960).

Micro-amounts of methyl chloride are determined by spectrophotometric procedure based on the Fujiwara reaction for chloroform. The method is sensitive but not specific, all alkyl halides react. Methyl chloride indicates a maximum absorption peak at 365 millimicrons. Other alkyl halides give single peak between 360 and 375 millimicrons.

-- AC Briefs

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