

- 141 Toxicological Studies on Hydrocarbons—(7). A Gravimetric Method for the Determination of Inorganic and Ethereal Sulfate in Urine. H. W. Gerarde.
Am. Ind. Hyg. Assn. J. 21, 511-514 (Dec. 1960).

A rapid simplified gravimetric method has been described for the determination of inorganic and total sulfates in urine. The procedure is suggested as a clinical method for the determination of the urinary sulfate ratio. The analysis can be carried out by a technician in the clinical laboratory since it does not require specialized equipment of the analytical laboratory or the skills and experience of the analytical chemist. A new rapid quantitative self-regulating pressure filtration technique has been developed for this procedure which may find wider application in analytical work in which filtration is required.

-- Author's summary

- 142 Safeguards for Work with Aluminum Alkyl Compounds. J. Kroger.
Zentr. Arbeitsmed. u. Arbeitsschutz 10, 101-103 (May 1960). German.

Aluminum alkyl compounds are being used in industry to an increasing extent, and their most important application is as catalysts in the production of polyethylene. Other uses which have been described are in the refining of aluminum, the production of tetraethyl lead and the synthesis of primary alcohols. This paper contains an account of the chemistry involved in the production of aluminum tri-ethyl and of the chemical reactions of this and other alkyl compounds. In strong solution these compounds are very corrosive to the skin and inhalation of their vapors may cause bronchial irritation. The fumes are perceptible in an atmosphere even in low concentration as they are white in color from the aluminum oxide they contain and in addition have a strong, musty odor. There is a long description of the essential safeguards to be taken for the workers which are based on the chemical character and high reactivity of these aluminum compounds. These precautions may include the use of masks and protective clothing and against fire, and adequate ventilation. Great care is also needed in the manufacture of the alkyl compounds since they are made under high pressure. Contact of the compounds with water must be avoided and for transport special containers are essential. These containers are filled and emptied in an atmosphere of dry nitrogen. Even small amounts of the compounds should be stored under a dry inert gas such as nitrogen or argon.

-- Bull. Hyg.

- 143 The Collection and Determination of Chromium in an Urban Atmosphere. S. M. Belth, E. Kaplan and C. E. Couchman. Arch. Environmental Health 1, 311-315 (Oct. 1960).

A method is described for the detection and measurement of microgram quantities of chromium in large numbers of atmospheric dust samples collected on filter paper tape. The method was applied to a study of chromium in an urban atmosphere.

-- Authors' summary

- 144 Chronic Mercurial Intoxication. A Review. Frances E. Noe.
Ind. Med. & Surg. 29, 559-564 (Dec. 1960).

A review of the sources, pathogenesis, symptoms, physical findings, and chronic mercury toxicity has been presented. Prevention and control of exposure to mercury in laboratories and work areas has been described, with particular emphasis on technique for handling of the free metal, based on the findings of several studies of chronic mercurialism conducted in industrial and scientific laboratories. The bibliography contains 41 references.

-- Author's summary

- 145 Determination of Mercury in Blood. M. B. Jacobs, S. Yamaguchi, L. J. Goldwater and H. Gilbert. Am. Ind. Hyg. Assn. J. 21, 475-480 (Dec. 1960).

A method for the ultramicro-determination of mercury in blood has been presented. It depends upon a cold digestion of the blood with potassium permanganate and sulfuric acid,