

FLUORIDES IN AIR OF A WATER PLANT FEEDING SODIUM FLUORIDE. JEROME C. ZUFELT, Water & Sewage Works **97**:335-336, 1950.

When atmospheric samples were examined at various locations in a H_2O plant where NaF is fed as a municipal anticaries measure, the F concentration varied from 0.025 to 0.134 mg./cu. m. for routine operations, compared with the maximum allowable concentration of 2.5 mg./cu. m. Dumping barrels into a hopper produced an atmospheric concentration of 8.89 mg./cu. m. Urinary F concentrations determined for plant personnel varied from 0.1 to 1.58 mg./l. of urine, with an average of 0.72, as compared to the concentration of 2 mg./l. considered as indicative of excessive F absorption.

C. L. CAMPBELL [CHEM. ABST.].

DETERMINATION OF FREE QUARTZ IN LORRAINE IRON ORES. J. AUBRY and G. TURPIN, *Rév. mét.* **47**:146, 1950.

A 1 Gm. sample ground to pass 120 mesh is treated in the cold with AcOH-AcONa of pH 2.5, filtered through a tared Al_2O_3 crucible, and the precipitate boiled for a few minutes in 20 per cent Na_2S solution. After filtering through the same crucible the precipitate is transferred into the original beaker, boiled with 100 cc. of Na_2S solution, filtered through the crucible, and washed with hot H_2O . The precipitate is transferred to a beaker, treated with 200 cc. HCl and 200 cc. HNO_3 and then filtered through the crucible, washed with hot H_2O , dried, and weighed.

J. D. GAT [CHEM. ABST.].

ATMOSPHERIC CONTAMINATION BY PETROLEUM-TREATING ESTABLISHMENTS. B. P. GURINOV and F. I. DUBROVSKAYA, *Gigiena i Sanit.*, 1948, no. 12, p. 20.

In the atmosphere surrounding the areas of petroleum refineries handling high-S raw material, H_2S is found in significant amounts in a 3 km. radius (over 0.5 mg./cu. m.). Typical atmospheric analyses in cities in the vicinity of the refineries are cited, indicating the necessity for rigid control of waste gases in such installations. Especially in foggy weather the H_2S concentration may be significant under proper wind conditions in locations 1 or more kilometers away from the plant.

G. M. KOSOLAPOFF [CHEM. ABST.].

SANITARY AND HYGIENIC WORKING CONDITIONS IN USE OF SHALE GENERATOR TAR FOR BINDER IN THE CASTING INDUSTRY. E. M. STEPANENKO, *Gigiena i Sanit.* 1950, no. 5, p. 24.

Thermal decomposition of shale generator tar forms harmful gaseous products which contain appreciable amounts of CO. Vegetable oils used as binding agents give a similar gaseous decomposition and actually generate more gases than the tar. The volatiles from the tar include aldehydes and phenols, as well as appreciable amounts of SO_2 and volatile S compounds. The results of air analysis in various locations in a casting plant are given.

G. M. KOSOLAPOFF [CHEM. ABST.].

PROPHYLAXIS OF MANGANESE POISONING IN STEEL SMELTING. S. V. MILLER, V. N. DYMCHENKO, S. D. LIKHTENShteIN and M. I. EPISHEVA, *Gigiena i Sanit.* 1950, no. 1, p. 26.

Air analysis in various locations of a steel-treating plant showed numerous locations containing over 0.0003 mg./l. of Mn; this is especially true in winter months. Usually MnO and Mn_2O_4 are found in the aerosols. Localized, individual suction outlets are recommended, especially at the sites of melting operations for generally improved ventilation.

G. M. K. [CHEM. ABST.].

SOME PROBLEMS OF INDUSTRIAL AIR ANALYSIS. VELIMIR VOUK and MIRKA FUGAS, *Arhiv za Higijenu Rada* **1**:168-191, 1950.

Some important problems of industrial air analysis are discussed: (1) maximal allowable concentrations, (2) sampling procedures and (3) calibration of instruments and analytical methods. Tables comparing American, British, and Soviet maximum allowable concentrations are included.

ENGLISH SUMMARY.