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several departures from standard foundry practice which introduce materials not usually encountered in foundries. Thus, in addition to the usual air contaminants characteristic of foundries, there may be water soluble fluorides, hydrofluoric acid, sulphur dioxide, chromic acid, carbon tetrachloride, magnesium oxide, and magnesium metal -- and this list will probably grow as time goes on. Data are presented as to concentrations of fluorides found in the vicinity of several operations which may give rise to these compounds in air. In addition, concentrations of MgO and SO_2 from pouring and "salting out" are reported. Difficulties experienced as a result of these exposures and suggestions for overcoming them are presented.

364 The Metabolism of Fluorides. W. Machle and E.J. Largent. Presented at Amer. Ind. Hyg. Assoc. Convention, Cincinnati, O., April, 1942.
Mottled enamel, industrial fluorosis, Darmous, Gaddur, and fluorine cachexia are clinical abnormalities caused by the absorption of excessive amounts of fluoride. Moreover, acute fatal poisoning has resulted from the ingestion of fluorides. The existence of these problems of public health and industry has occasioned investigation of the behavior of fluoride in the bodies of human experimental subjects. Balance experiments have established levels of intake and output of fluoride with the subject on a normal diet. The urine was found to be the principal route of excretion. There was increased absorption and retention when fluoride was added to the diet in different amounts (up to 25 times the normal intake). Within rather wide limits a relatively constant proportion of the excess fluoride was stored in the body. Absorption of fluoride in quantities up to 1 mgm. per diem was not associated with storage, but amounts greater than 2 mgm. per diem resulted in storage. The quantities stored were not released and excreted after the intake was reduced to normal levels. The absorption of fluoride is greatly affected by the aqueous solubility of the fluoride salt ingested. Very large amounts of fluoride may be stored in the bones without the appearance of roentgenologic changes, although the bones are abnormal.

365 Silicon and Silicon Halogens. Queries & Minor Notes. J. Am. Med. Assoc., 118, 857 (March 7, 1942).
In reply to a query concerning industrial poisoning by "silicon gas," several possible forms of exposure are discussed. Air-borne suspensions of the element silicon might be construed as gaseous in the fume liberated on electric furnace treatment. The fine particles of such fumes collect as long cobweb-like streamers in flues, rafters, etc. It has been shown by animal experimentation that this form is inert and incapable of producing tissue changes except phagocytosis. The same was found true of coarser particles 1 to 3 microns in diameter. On the other hand, some of the gaseous compounds of silicon are injurious. Silicon tetrafluoride is a colorless, irritating gas. The tetrachloride has a suffocating odor and is used in the preparation of smoke screens. Several other halogen compounds are known. Of the organic silicates that might be inhaled as vapors, ethyl silicate has been found to be highly toxic on injection into animals.

366 Bronchiogenic Carcinoma in Association with Pulmonary Asbestosis. Report of Two Cases. H.H.Holleb and A.Angrist. Am.J.Pathology. 18, 123-125 (January,1942).
Two cases are reported in which men between 40 and 50 were found to have both asbestosis and a primary carcinoma of the lungs. A table listing 10 reported cases, collected from the literature, in which both diseases occurred, is presented. The authors conclude that the data from 2 cases, with some reports in the literature in doubt, are insufficient for a statistical evaluation, and that caution should be used in ascribing carcinoma to asbestosis. In one case the carcinoma was in a region least affected by asbestosis, but where carcinomas often occur.

DEPOSITION EXHIBIT #6-A Dr. Gottlieb