

NOVEMBER 1992

STIMULATING THE MIND

- 523 Watch Mercury. Anonymous. *Safety Eng.*, 81, 10-12 (February, 1941).
The easy evaporation of mercury contributes greatly to its high place among hazardous substances. For that reason good housekeeping and mechanical ventilation are necessary in all places where it is used. Workers on equipment used in connection with mercury should wear a positive air line respirator or a gas mask. The absorption of 1 mg. of mercury daily over an extended period may cause poisoning. In the absence of definite information on safe limits, 6 to 15 parts of mercury per 100 million parts of air may be considered a safe concentration of fumes, based on steady work and a forty hour week. Preventive recommendations are listed, including the usual cleanliness rules, medical examinations and the use of mercury fume detectors, indicating and recording.
- 524 Industrial Arsenic Poisoning. Freitag. *Z. ges. Schiess- u. Sprengstoffsw.* 35, 135 (1940). (German).
This article emphasizes the danger of poisoning from arsine, an intensely poisonous gas. There is always a possibility of the formation of dangerous amounts of arsine when acid is brought into contact with arsenic residues or metals containing arsenic. For instance, many deaths have been caused when water is used to wash out the sludge contained in sulfuric acid tanks. The dilute acid reacts with iron to produce nascent hydrogen, which in turn reduces the arsenic, always present in the sludge, to arsine. Similar possibilities exist in connection with the refining of lead, tin and zinc, which usually contain some arsenic. It is important to remember that aluminum arsenide produces arsine directly by reaction with water. The presence of arsenic as an impurity in zinc in electro-technique has also given rise to the formation of arsine. Possibilities of poisoning from solid forms of arsenic are also described.
- 525 The Spectrographic Analysis of Lead in the Blood. E.C. Vigliani. *Rass. med. ind.* 11, 289-306 (1940). (Italian).
Since it is now believed that the toxic effects of lead are due to the quantity in the blood, it is essential for any study of lead poisoning to have a method of analysis suited to the determination of very small quantities. For this purpose a curve comparing the known quantities of lead and molybdenum was prepared by the use of the line for lead at 2833 Å. and for molybdenum at 2815 Å. There is a good review of previous work, in which the findings of other authors on the amounts of lead in blood of normal persons not exposed to lead, and persons exposed to, and finally poisoned by, lead are discussed. There is no correlation between the amount of lead in the blood and the health of a person, some individuals being much more resistant than others. However, the method can be used successfully in the diagnosis and prognosis of lead poisoning. The values found for normal persons not exposed to lead, and for those exposed and poisoned are, respectively 57, 68 and 108 gamma %. A total of 300 determinations on 163 persons was made. Twenty-eight references are cited.
- 526 The Bone Marrow in Experimental Lead Poisoning. C. Betti. *Rass. med. ind.* 11, 584-603 (1940). (Italian).
A description of the histological characteristics of the marrow cells of rabbit in poisoning induced by injections of lead acetate solution.
- 527 Occupational Cadmium Poisoning from Electroplating with Cadmium. G. Pancheri. *Rass. med. Indust.* 11, 623-31 (1940). (Italian).
Poisoning occurring in the extraction of cadmium and fusing of alloys is described. The author presents the case history of a man engaged in electroplating with cadmium, with description of symptoms, some of which persisted over two weeks. No cadmium was found in the urine or feces, but it was revealed in the blood by spectral analysis.