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with pneumoconiosis accompanied by emphysema or bronchitis.

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Vanadium poisoning. G. V. James. *Analyst* 85, 851-2(1960). A typical case is reported of V poisoning of workers who were removing incrustations from Al tanks in which bauxite had been treated with alkali. The symptoms of the illness and the detection procedures are discussed. From *CZ* 1961(14), 4803.

Hans Gunthardt

Chronic benzene poisoning. Heinz Thiele (Deut. Zentralinst. Arbeitsmedizin, Berlin-Lichtenberg). *Pracovní Lekar.* 16(1), 1-7(1964)(in Czech). Investigation of 107 workers exposed to C_6H_6 in a plant processing brown coal showed that women above 40 years of age are particularly susceptible as manifested by hypoplasia or aplasia of the bone marrow in 97% of severely intoxicated women in comparison with 43% cases in men in similar condition. Very severe cases were characterized by a picture similar to megaloblastic anemia in the bone marrow and peripheral blood. In less severe poisonings with a normal cell count in the bone marrow there was a disorder in the maturation of erythropoiesis and leukopoiesis. C_6H_6 -caused hemoblastoses were found only in men. Myeloses and erythroblastoses were fairly frequent; lymphadenoses were rare. C_6H_6 poisoning was characterized by the following features and early hematol. signs: inhibited maturation and division of blood formation (radiomimetic effect), facultative megaloblastoid picture, vitamin C deficiency without signs of scurvy, toxic damage of the capillaries and excessive bleeding, hemoglobin levels below 80% in men and 75% in women, drop in polynuclear leukocytes below 3000, pycnosis of their nuclei, hypersegmentation, proliferation of the no. of nuclear processes, changes in the neutrophil plasma (basophilia, toxic granules), enlargement of the diam. of red blood cells, changes in the lymphocyte nuclei and their size, decreased capillary resistance, maturation disorders, mitoses, and morphol. changes in the sternal punctate. The same picture was produced exptl. in rabbits. Subcutaneous application of folic acid (I) prevented the development of megaloblastoidia. Cysteine prevented hypoplasia of the bone marrow. Simultaneous application of cysteine and I, however, cancelled their favorable effect. H. T. suggests that the so-called achrestic pernicious anemia of the Israels and Wilkinson type are actually chronic C_6H_6 poisonings that have not been recognized as such. *CA* 34, 5930¹.

L. J. Urbanek

Etiopathological and clinical aspects of talc pneumoconiosis. G. F. Rubino, P. Maranzana, L. Pettinati, and G. Scansetti (Univ. Turin, Italy). *Med. Lavoro* 54(6-7), 496-506(1963). A study was made of 357 workers exposed to talc. A high incidence of pneumoconiosis was found in talc miners and workers grinding talc which also contained cryst. silica, tremolite, and serpentine. In a rubber plant where these fibrogenic agents were absent from the talc, the no. of cases of pneumoconiosis was low.

Leonard D. Pagnotto

Pneumoconioses produced by blast-furnace dust. H. Drasche and W. Steinhäusen. *Beitr. Silikose-Forsch.* No. 78, 19-50(1963). Conditions leading to the production of the title dust (I), and its phys. and chem. characteristics are described. The I is high in Fe but the SiO_2 content is not great. The development of different stages of pneumoconiosis in 15 workers exposed to the I for 10 years is considered in relation to the SiO_2 and other constituents as well as the size of inhaled I particles.

W. C. Tobie

Analysis of the hypotensive effect during SH group inactivation. I. M. Trakhtenberg, I. V. Savits'kii, and F. P. Trinus. *Fiziol. Zh., Akad. Nauk Ukr. RSR* 9(6), 748-53(1963). Preliminary investigation among workers of a Hg plant with an initial phase of mercurialism showed that Unithiol (I), was capable of correcting hypotension. As I had no effect in normotensive persons it was concluded that it may act specifically on the SH groups of cellular enzymes blocked by Hg poisoning. In intact rabbits receiving $CoCl_2$ or $CdCl_2$ intravenously (resp. 5 and 10 mg./kg.) as well as in those subjected to chronic inhalation of Hg vapors, I prevented hypotension and depression of the pressor response to epinephrine. The contractility of isolated aortic strips from rabbits, lost upon addn. of Co, Cd, or Hg salts to the perfusion fluid, was recovered when the strips were pretreated with I.

N. Jasinczuk

Hemolytic action in vitro of some powdered substances commonly employed in industry. A. Granata and D. Papalia (Univ. Messina, Italy). *Med. Lavoro* 54(6-7), 519-23(1963). Finely divided asbestos, red lead, and $CaSO_4$ produced hemolysis in 40 samples of heparinized blood within 6 days. The hemolytic action was weak with kaolin and absent with silica, hematite, and $CaCO_3$.

Leonard D. Pagnotto

Nitroglycol poisoning in an explosives plant. II. H. Hasegawa, M. Sato, H. Yoshikawa, H. Sakabe, M. Yamaguchi, and K. Hotta. *Bull. Natl. Inst. Ind. Health* No. 8, 10-20(1962); cf. *ibid.* No. 4, 54-7(1960). Nitroglycol was readily converted into NO_2^- which can be used to compute the amt. of compd. absorbed into the blood of workers. At nitroglycol concns. of

triphosphate was affected. The presence of nitroglycol increased the O affinity of hemoglobin and lowered blood catalase activity.

L. K. Yee

A continuously recording instrument to measure air-borne ion concentration. Alfred L. Mendenhall, Jr., and David A. Fraser (U.S. Public Health Serv., Cincinnati, Ohio). *Am. Ind. Hyg. Assoc. J.* 24(6), 555-62(1963). A vacuum tube electrometer with concentric ion collectors was used to monitor ion concns. in animal chambers and in a nuclear submarine. The electrometer can operate high impedance recorders. Wm. MacL. Pierce

Chemistry of public hazards due to poisonous gases. I. The filter paper method for measuring sulfur dioxide, nitrogen dioxide, and chloride in the atmosphere. Shozo Fukui (Kanagawa Prefect. Public Health Lab., Yokohama, Japan). *Bunseki Kagaku* 12(11), 1005-11(1963). Immerse a filter paper in 5% K_2CO_3 , dry in an oven at 50°, and expose to the atm. for 1 month by fixing it with clips in a louvered box. Treat the paper (5×10 cm.) with 100 ml. of H_2O , heat over boiling water for 15 min., allow to cool and filter. S oxides, N oxides, and Cl^- in the filtrate are detd. by the $BaCl_2$ method, the diazotization method, and the Hg chloranilate method, resp. This method is not affected by the difference of the quality of reagent used, and is only slightly affected by changes in the atm. temp. and humidity. K. Kawamura

Significance of the determination of benzoic acid in urine for the diagnosis of acute toluene poisoning. Jana Paderova and Jarmira Srbova (Klinika Nemoci Povolani, Karlova Univ., Prague). *Pracovní Lekar.* 16(1), 21-4(1964). Two cases of severe poisonings are described. The noxious concns. (8-13 and 60-70 mg. PhMe/l. air) were calcd. from the amts. of $BzOH$ excreted in the urine. Loss of consciousness was caused by 10-12 g. PhMe absorbed in 30 min. L. J. Urbanek

New steps to minimize the hazards of air pollution for public and voluntary agencies: for the doctor and his patient. Vernon G. MacKenzie (U.S. Public Health Serv., Washington, D.C.). *Am. J. Pub. Health Suppl.* 54(1), 79-83(1964). J. A. Kennedy

Application of thin-layer chromatography to the analysis of atmospheric pollutants and determination of benzo[a]pyrene. Eugene Sawicki, T. W. Stanley, W. C. Elbert, and J. D. Pfaff (Robt. A. Taft Sanit. Eng. Center, Cincinnati, Ohio). *Anal. Chem.* 36(3), 497-502(1964). R_F values and fluorescent colors have been obtained through thin-layer chromatography of 20 polynuclear aromatic hydrocarbons with the following adsorbents and developers: alumina with pentane:ether (19:1; vols.); cellulose acetate with EtOH:toluene:water (17:4:4; vols.); and cellulose with dimethylformamide:water (1:1, vols.). Of the 3 adsorbents alumina gave the best sepn. of fluorescent org. compds. from the org. fractions of airborne and air pollution source particulates. The pattern and fluorescent color of the spots of a thin-layer chromatogram varies with the type of pollution. The cellulose acetate adsorbent system gave best results for the sepn. of the benzopyrene fraction obtained in column chromatography. The cellulose adsorbent system gave the best results for the sepn. of the polynuclear aromatic hydrocarbons. The greatest range of R_F -values was obtained with this adsorbent. Two methods for the estn. of benzo[a]pyrene following thin-layer chromatography are described. One method involves ultraviolet analysis at 382 m μ ; the other involves spectrophotofluorimetric analysis in H_2SO_4 . E. V. Jones

New method for determining sulfur dioxide in air, suitable for series testing. Dezso Tapfer (Orvostud. Egyet., Budapest, Hung.). *Egészségtudomány* 7(4), 322-31(1963). The method was based on detg. the SO_2 , after being oxidized to sulfate, by back titration of added excess Ba ions. The detn. was not disturbed by other materials with reducing properties. Only H_2S , possibly also in the air, had an influence on the results. GGJH

Health physics control in processing beryllium. F. B. Crossley (Imp. Chem. Ind. Ltd., Birmingham, Engl.). *Inst. Metals, Monograph Rept. Ser.* No. 28, 665-76(1963). Details are given of industrial hygiene at a com. Be plant. Environmental control embraced stack, outdoor, samplings, deposit gages, effluent sampling (1 part Be:10⁷ parts effluent), decontamination, and transport procedures. An appendix details the spectrographic procedure used for routine filter-paper analysis. J. W. Taylor

Derivaux, J., and Liegeois, F.: Toxicologie Veterinaire. Paris: Vigot Freres. 1962, 332 pp. 46 F.

Hatch, Theodore F., and Gross, Paul: Pulmonary Deposition and Retention of Inhaled Aerosols. New York: Academic Press. 1964. 192 pp. \$5.95.

Spengler, Guenter: Die Schwefeloxysäure in Rauchgasen und in der Atmosphäre. Ein Problem der Luftreinigung. Düsseldorf: Vereins Deut. Ing. -Verlag. 1964. 152 pp. 18.80 DM.

Purification of wash gases from aluminum electrolytic furnaces, with simultaneous recovery of fluorine. Metallgesellschaft A. G. (by Curt Scheidel). *Ger.* 1,161,040 (Cl. C 22d), Jan. 9,