

Ilus. 1968 [recd. 1969]. [In Jap. with Engl. sum.]--For the pollutants produced by exhaust gas from motor vehicle and blasting gas from dynamite, carbon monoxide, nitrogen oxides and dust were determined inside the Nihonzaka Tunnel under construction for the Tokyo-Nagoya expressway. The pollutants obtained near the blasting place showed high concentrations of carbon monoxide, nitrogen oxides and the dust, with levels of 350-1,200 ppm, 10-35 ppm, and 5.3-60.5 mg/m³, respectively. These results were due to defective ventilation.

43940. MIRKINA, K. S., and V. I. ERMOLINSKII. O sluchayakh otravleniya rnut'yu sredi meditsinskikh rabotnikov. [Cases of mercury poisoning among medical workers.] SB NAUCH TR KUIRYSHEV NAUCH-ISSLED INST EPIDEMIOL GIG 5. 82-83. 1968. Translated from REF ZH OTD VYP FARMAKOL KHIMOTER SREDSTVA TOKSIKOL. 1969, No. 5.54.725. --Observations were made of 4 cases of Hg poisoning in medical personnel as a result of inattention to the rules for working with apparatus containing Hg. The studies, which were carried out in several medical institutions, revealed the presence of Hg in washings from equipment, walls, floors and in the air of the location. In a number of cases the concentration of Hg significantly exceeded the maximum allowable concentration. Working with apparatus containing Hg can be a considerable danger when the rules for safety techniques are not observed.

43941. IVANOVA, I. S., and M. M. MEL'NIKOVA. (Cent. Inst. Postgrad. Med., Moscow, USSR.) K voprosu o sostoyanii zdorov'ya rabochikh v proizvodstve nitrofoski. [Problems regarding the health conditions of workers in nitrogen-phosphorus-potassium fertilizer factories.] GIG TR PROF ZABOL 12(12): 49-50. 1968. --Observations conducted on 187 workers, disclosed the presence of different degrees of bronchitis, which were observed in marked and functional disorders of the nervous system in the form of vegetative dysfunction. The effect of a number of substances, having a stimulating effect (such as chlorine and sulfuric compounds) had a significant role in the development of bronchitis. Changes occurring in the nerve system are connected with the effect of a complex of chemical substances.

--L. G. G.

43942. BUSHUEVA, T. I., E. A. ZABOZLAIEVA, and A. Ya. YAKUBOV. K voprosu o delstvii yadokhimikatov na aktivnost' svoirotochnykh fermentov i belkovuyu kartinu krovi. [The action of chemical poisons on the serum enzyme activity and the blood protein picture.] TR RADZH MED INST 98. 139-142. 1968. Translated from REF ZH OTD VYP FARMAKOL KHIMOTER SREDSTVA TOKSIKOL. 1969, No. 8.54.939. --When cotton was being sprayed with organophosphorus insecticides, the concentration of them in the air of the working zone was 0.00002-0.002 mg/l. In the air of warehouse locations it was 0.0006-0.002 mg/l. When cotton was dusted with DDT from tractors, the concentration of it in the air of the working zone was 0.002-0.04 mg/l. Ninety persons were examined before the beginning of the field work season when the chemical poisons were used and 36 were examined during the season (8 of them were working with chemical poisons for the 1st time and the remainder had exposure histories from 1 to more than 5 yr). Before the beginning of work organophosphorus insecticides were not found in the blood of those examined. They were found in the blood of 50% of them during the working season. A decrease was noted in the serum cholinesterase and alanine aminotransferase. There was also a decrease in the serum albumins and an increase in the α_1 and gamma globulins and in the albumin-to-globulin ratio. In some of those examined the thymol test was positive. These results are evaluated as the result of a disturbance of liver function.

--S. T.

43943. POKROVSKII, V. A., A. S. FAUSTOV, and S. V. IVANOV. O peresmotre i utocnenii predel'no dopustimnykh koncentratsii benzola, tolnola, etilbenzola i dietilbenzola v vozdukh proizvodstvennykh pomeshchenii. [Review and refinement of the maximum allowable concentrations of benzene, toluene, ethylbenzene, and diethylbenzene in the air of industrial locations.] TR VORONEZH MED INST 73. 13-19. 1968. Translated from REF ZH OTD VYP FARMAKOL KHIMOTER SREDSTVA TOKSIKOL. 1969, No. 4.54.869. --From the literature and experimental data on the toxicohygienic estimation of aromatic hydrocarbons, reduction of the maximum allowable concentration in the air of industrial locations is recommended as follows: benzene, from 20 to 5 mg/m³ and toluene from 50 to 10. The maximum allowable concentration for ethylbenzene as 5 mg/m³ and for diethylbenzene 10 mg/m³ remains the same. When estimates are made of the toxic action of the substances of a single homologous series, methods should be used which are adequate for this group of substances and they should be used in all the laboratories developing the maximum allowable concentrations. While their value is being decided, there should be obligatory consideration of the clinical material.

43944. PARAMONCHIK, V. M., and V. I. PLATONOVA. O funktsional'nom sostoyanii pecheni i zheludka u lis, podvergayushchikhsya vozdeistviyu khlororganicheskikh yadokhimikatov. [Functional state of the liver and stomach in people, affected by organochloride chemical poisons.] GIG TR PROF ZABOL 12(13): 27-31. 1968. [Engl. sum.]--Investigations covered functional state of the liver and stomach in 70

persons handling organochlorous compounds (DDT, hexachlorane, ether sulfonates). Persons with a relatively short service record (up to 10 yr) had increased acidic and pepsinogenic gastric functions and slightly pronounced disorders of the liver function. Inhibition of the acidic and pepsinogenic gastric functions, along with a marked derangement of the proteidine, carbohydrate, pigmental, antitoxic and secretory function of the liver occurred in persons with a long service record (in excess of 10 yr) exposed to effects of organochlorous compounds. --C. M. M.

43945. VAZIN, A. N., and E. I. PLOKHOVA. K sozdaniyu eksperimental'nol modeli "toksicheskogo angionevroza", voznikayushchego pri khronicheskom vozdeistvii na organizm parov vinilkhlorda. [Creation of an experimental model of "toxic angioneurosis" developing from the chronic action of vinyl chloride vapors on an organism.] GIG TR PROF ZABOL 12(7): 47-49. 1968. --In rabbits the chronic action of vinyl chloride vapors at concentrations of 9-10 mg/liter alters the rate of cardiac contractions, disturbs the electrical and mechanical activity of the heart, changes the level of maximum arterial blood pressure and causes a reduction in the rate of linear blood flow. The changes described in the functions of the cardiovascular system in the experimental rabbits indicate that the model of the pathology which develops from the chronic action of vinyl chloride on an organism can be useful for studying questions of the pathogenesis and experimental therapy of toxic angioneurosis.

43946. GRATSANSKAYA, L. N., and E. N. SOLOV'YEVA. Prichiny dlitel'noi invalidnosti pri khronicheskikh professional'nykh intoksikatsiyakh. [Reasons for prolonged invalidism during chronic occupational intoxication.] GIG TR PROF ZABOL 12(8): 10-11. 1968. [Engl. sum.]--Case histories of 187 persons incapacitated by chronic poisoning with Mn, gasoline, benzene substances and Pb were analyzed (starting from the beginning of invalidism). The follow-up period averaged 6.5 yr. Investigations showed persistence of clinical manifestations of poisoning despite discontinuation of any exposure to the effects of toxic substances. Causes responsible for the continued incapacitation of individuals trained and untrained for new occupations were analyzed. A medical approach to treating these 2 groups of patients was suggested.

--C. M. M.

43947. APEL' Ya. A. Materialy k toksikologii nekotorykh promyshlennykh produktov pri proizvodstve izoprenovogo kauchuka. [Information on the toxicology of some intermediate products in the production of isoprene rubber.] SB NAUCH TR KUIRYSHEV NAUCH-ISSLED INST EPIDEMIOL GIG 5. 87-88. 1968. From: REF ZH OTD VYP FARMAKOL KHIMOTER SREDSTVA TOKSIKOL. 1969, No. 1.54.885.

43948. TILLER, J. R., R. S. F. SCHILLING, and J. N. MORRIS. (London Sch. Hyg. and Trop. Med., London, Engl., UK.) Occupational toxic factor in mortality from coronary heart disease. BRIT MED J 4(5628): 407-411. Ilus. 1968. --Between 1933 and 1962 42% of 223 deaths of male workers exposed to carbon disulfide in 3 viscose rayon factories in England and Wales were certified to coronary heart disease--compared with 24% of the deaths in the other workers of the same age, 17% of the deaths in other local men, and 14% in the Registrar General's Tables. Of men with more than 10 yr in the rayon industry employed in 1 of the factories, those exposed to carbon disulfide had death rates from coronary heart disease between 1950 and 1962 2 1/2 times that of the other workers. This evidence of an occupational risk of coronary heart disease from long-term exposure to low concentrations of CS₂ was strongest in the 1940s and slight in 1958-62; it may relate to wartime plant conditions. Current and prospective biochemical and morbidity surveys of exposed workers are now needed. These may also throw light on general issues of atherosclerosis and coronary heart disease. --J. W. S.

43949. ZAEVA, G. N., I. P. ULANOVA (Inst. Ind. Hyg. Occup. Dis., Acad. Med. Sci. USSR, Moscow, USSR.), and L. A. DUEVA. Materialy k peresmotru predel'no dopustimol koncentratsii formal'de gida v vozdukh proizvodstvennykh pomeshchenii. [Materials for a reexamination of the maximal permissible concentration of formaldehyde in the air of industrial establishments.] GIG TR PROF ZABOL 12(7): 18-20. 1968. [Engl. sum.]--In a concentration of 5 mg/cubic m formaldehyde produces general toxic and irritative effects and some manifestations of sensitization. Clinical and hygienic observations made in a number of woodworking and textile industries demonstrated that on the level of 5 mg/cubic m formaldehyde provoked irritation of the upper respiratory tract and increased the incidence of disease among workers. The maximal permissible concentration of formaldehyde should be reduced to 0.5 mg/cubic m. --C. M. M.

43950. LOPEZ-AREAL DEL AMO, LUIS (Inst. Antituberc. Inst., Bilbao, Spain.), and ISAAC FERNANDEZ MARTIN GRANIZO. Neumocistosis pseudomoral por talco y caolin. [Pseudomoral pneumocistosis by talc and kaolin.] ENFERM TORAX 17(87): 389-410. Ilus. 1968 [recd. 1968]. --A pneumocistosis in a 64 yr old rubber worker was discovered after he had worked in the rubber industry for 10 yr. Radiological manifestations included pleural thickening; the diaphragm