1971.--In the development of pulmonary silicosis in rats studies on changes in the total, esterified, free cholesterol and phospholipids were made in lungs, liver and blood plasma over a period of 200 days. Total cholesterol, its fractions and phospholipid content increased with time in the lungs of silicotic animals. Histochemically sudanophilic lipids were observed in the cytoplasm of pulmonary macrophages. Changes similar to those of lungs were not observed in liver and blood plasma; the increased lipid content of lungs during experimental pulmonary silicosis may be due to the localized degenerative action of silica on macrophages.

† 122288. MUELLER, W., and G. HOLZAPFEL. (Inst. Arbeitshyg., Univ., Jena, E. Ger.) Ueber die Beziehung zwischen Delta-Aminolaevulinsaeure-Ausscheidung im Harn und Blutbleispiegel bei Arbeitern mit unterschiedlicher Bleiexposition. [The relationship between ALA in urine and lead in blood in workers with different lead-exposure.] INT ARCH ARBEITSMED 27(4): 331-337. illus. 1971. [Engl. summ.]--In 3 groups of differently exposed lead-workers the relationship between ALA [gamma-aminolevulinic acid] in urine and Pb in blood was investigated. This relationship is not constant and depends on the kind and intensity of exposure. It is difficult to establish an acceptable limit value of the ALA-output in urine. Women seem more sensitive to Pb than men.

122289. LIVSHITS, O. D. O vozmozhnosti izpol'zovaniya mestnykh pektinsoderzhashchikh pishchevykh produktov v profilaktike saturnizma. [The possibility of using local pectin-containing food products for the prophylaxis of lead poisoning.] TR PERM MED INST 82: 194-199. 1970. Translated from REF ZH OTD VYP FARMAKOL KHIMIOTER SREDSTVA TOKSIKOL, 1970, No. 10.54.589.--For 4 mo, lead acetate at 50 mg/kg was fed intragastrically to 2-mo.-old male rats. Those of group 1 were maintained on the usual ration and those of group 2 were given the usual ration + 50% raw carrots. By the end of the exposure to Pb, the rats of group 1 had developed the symptoms of chronic Pb poisoning: torpor, disturbances of nutrition, loss of hair and a reduction in food consumption. During the entire period of observation all the rats of group 2 remained well, gained weight and had a good appetite. In rats of group 2 the daily diuresis was 9-11 ml. On the 20th-25th day of exposure those of group 1 showed hypouria (3-4 ml). The average weight at the end of the experiment was 154.1 g for group 1 and 192 g for group 2. The kidneys and gastrointestinal tract of the rats of group 2 excreted 97.5 mg Pb (65% of that taken into the body) [illegible] rats of group 1, 60 mg (40%). The prophylactic action of local [illegible]-containing food products should be studied for use in the therapeutic-prophylactic diet of workers exposed to Pb.--S. T.

122290. LOSKUTOV, N. F., and N. F. SHUSTVAL'. Izmenenie elektrokardiogrammy pod vliyaniem krotononitrila i izokrotono-nitrila. [Changes in the electrocardiogram under the action of crotononitrile and isocrotononitrile.] TR KHAR'KOV MED INST 81: 135-139. 1969. Translated from REF ZH OTD VYP FARMAKOL KHIMIOTER SREDSTVA TOKSIKOL, 1970, No. 8 54.635.--In rats and guinea pigs given a single median lethal dose of crotononitrile (I) or isocrotononitrile (II; used in the production of synthetic rubber), the ECG showed a reduction in the voltage of the QRS complex, an increase in the number of heartbeats to 600/min, an upward shift from the baseline of segment ST, and the appearance of a high, pointed T wave (for 3-4 days). In subacute experiments I was given intragastrically to rats at 100 and 50 mg/kg and II at 17 and 34 mg/kg for 1.5 mo. Guinea pigs were given an aqueous solution of 27 or 55 mg/kg of I to drink for 2.5 mo. The rats showed an increase in the heart rate, upward displacement of the ST segment from the baseline, an increase in the T2-3 wave to 7-8 mm, a reduction in the QRS voltage, an increase in the PQ interval, and, in some of the animals, sinoauricular blockade or blockade of the left branch of the bundle of His. Changes of this type were also found in guinea pigs. Impairment of the principal functions of the myocardium occurs: the conductivity, excitability, automatism, and contractility, this is explained by impairment of the metabolic processes in the myocardium caused by the poisoning. There is a bibliography with 10 references. From the Ukrainian Institute for the Postgraduate Education of Doctors, Khar'kov, USSR.--S. T.

122291 BASALAEV, A. V. (Gorki Inst. Ind. Hyg. Occup.Dis., Gorki, USSR.) Opyt primeneniya krupnokadrovoi flyuorografii pri ossledovanii skeleta u rabotayushchikh v kontakte s nepredel'nymi uglevodorami etilenogo ryada (olefinami) i ikh khlorproizvodnymi (khlorvinil, trikhloretilen). [Experience with the use of large-frame photofluorography in examining skeletal bones of persons occupationally dealing with unsaturated hydrocarbons of the ethylene series (olefins) and their chlorine derivatives (vinyl chloride, trichloroethylene).] GIG TR PROF [illegible] 14(11): 34-37. 1970. [Engl. sum.]--These examinations revealed a definite reconstruction in the bones; osteosclerosis, osteoporosis, osteolysis and cystic changes. Traumatization of the limbs and prevalence in the clinical poisoning picture of these symptoms suggested lesions of higher vegetative centers, particularly of the hypothalamic region. These changes may be of a neurodystrophic nature. Large-frame photofluorography may be recommended for roentgenological examinations of the skeleton in occupational groups with potential bone pathology.--C. M. M.

122292. AMIROV, R. O., I. I. ALEKPEROV, and V. D. PIVOVAROV. K sanitarno-gigienicheskoi kharakteristike uslovii truda rabotayushchikh pri poluchenii katapina (IKIKhP-2). [A sanitary-hygienic characterization of the working conditions of persons producing katapin (IKIKhP-2) 1-(p-dodecylbenzyl)-pyridinium.] TR AZERB NAUCH-ISSLED INST GIG TR PROF ZABOL 3: 139-143. 1969. From: REF ZH OTD VYP FARMAKOL KHIMIOTER SREDSTVA TOKSIKOL, 1970, No. 1.54.1319.

122293. BRAKHINOVA, I. T., and G. V. SAMSONOV. Sravnitel'naya otsenka vliyaniya na organizm nitridov perekhodnykh metallov i nemetallov. [Comparative study of the effect of transitional metal and nonmetallic nitrides on the body.] GIG TR PROF ZABOL 14(12): 48-50. 1970[recd. 1971].--In experiments with white rats nitrides of nonmetals including BN, Si_3N_4, and BNC had weakly pronounced fibrogenic activity and caused pneumoconiotic changes. Metal-like nitrides including TiN, ZrN and NbN in addition caused dystrophy of the liver and epithelium of the renal convoluted tubules. The recommended maximum permissible dose for nitrides of non-metals and NbN is 10 mg/m^3, for AlN is 4 mg/m^3 and for ZrN is 5 mg/m^3. The toxic effects of nitrides corresponded to their electron structure. Their biological activity decreased with the increased possibility of forming S^2p^6-electron configurations during interaction with N of non-metals and semi-metals and also d^5-configurations with the formation of nitrides of transitional metals.--N. L. G.

122294. KARIMOV, A. M. Professional'nye zabolevaniya kozhi u khlopkorobov, vyzvannye yadokhimikatami, i meropriyatiya po ikh profilaktike. [Occupational skin diseases in cotton growers caused by chemical poisons and measures for their prevention.] GIG TR PROF ZABOL 14(12): 35-37. 1970[recd. 1971].--Dermatitis and eczema occurred in 30 persons out of 32 in direct contact with DDT and hexachlorane. The disturbances were of a seasonal nature. Of 633 cotton growers, the skin was sensitive to the phosphoorganic insecticides methylmercaptophos, octamethyl and butyphos in 42%. The time of development of sensitization to different chemicals varied and depended on body response, concentration of the chemical, work conditions and the nature of contact.--N. L. G.

122295. [illegible]AN, A. S., V. A. D'YACHENKO, V. I. IVANOV, and A. P. TALIN. Opyt medikamentoznoi profilaktiki porazhenii nervnoi sistemy pri intoksikatsii ognestoikim maslom "Ivviol'-3". [Experience in medical prevention of injury to the nervous system in poisoning with the fireproof oil "Iviol'-3".] GIG TR PROF ZABOL 14(12): 37-39. 1970[recd. 1971].--Persons working without gas masks in the remains of a breakdown at an electric power station were intoxicated by the fumes of "Iviol-3", a compound based on trixylenyiphosphate, vitamin E, vitamin B_6 and phytin was effective in preventing damage to the nervous system.--N. L. G.

122296. ELISUISKAYA, R. V. Sostoyanie plodovitosti u zhivotnykh pri khronicheskom vozdeistvii parov metadiizopropilbenzola. [Condition of fecundity in animals subjected to chronic effects of metadiisopropylbenzene fumes.] GIG TR PROF ZABOL 14(12): 44-46. 1970[recd. 1971].--White rats (45) with strictly periodic oestral cycles were exposed to the fumes of metadiisopropylbenzene in concentrations of 0.2 mg/l and 1 mg/l 5 hr daily 5 times a wk for 5 mo. The course of the sexual cycle was disturbed with characteristic prolonged flow. The capacity for conception was substantially decreased. The average number of offspring decreased as well as their weight. Gonadotropic effects of the compound are indicated. Women's work in the presence of this compound should be regulated.--N. L. G.

122297. SUKHAREVSKAYA, T. M., L. S. SAVEL'EVA, and A. I. VOROTNIKOVA. (Novosib. Sanit. Inst., Novosib., USSR.) Opyt primeneniya [illegible]-aminokapronovoi kisloty pri khronicheskoi intoksikatsii benzolom i ego gomologami. [Experience using [illegible]-aminocapronic acid in chronic poisoning with benzene and its homologues.] GIG TR PROF ZABOL 14(12): 39-41. 1970[recd. 1971].--[illegible]-Aminocapronic acid, vitamins B_6 and B_{12}, glucose and Fe preparations were used to treat 12 patients with chronic poisoning by benzene and its homologues with symptoms of hemorrhagic diathesis. A hemostatic effect was obtained in 12-days in patients with mild symptoms of hemophilia and in 2-3 day days in those with pronounced manifestations of diathesis. In addition to the hemostatic effect, capillary permeability and the fibrinolytic activity of the blood decreased and blood coagulation time speeded up. The number of mature platelets increased after treatment and the number of old thrombocyte forms increased.--N. L. G.

122298. MAN'KO, N. N. (Inst. Hyg. Toxicol. Pestic. Polym. Plast. Subst., Kiev, USSR.) Obosnovanie predel'no dopustimoi kontsentratsii Fozalona v vozdukhe rabochei zony. [Substantiation of the maximum permissible concentration of Fozalon in the air of a production area.] GIG TR PROF ZABOL 14(12): 46-48. illus. 1970[recd. 1971].--The