IN RE: ABRAMS November 1992

electroencephalographic abnormalities. Nine exposed workers from the same factory were examined, and two of these had symptoms suggestive of aldrin poisoning. At a later date one of these two men and one other man developed convulsions associated with abnormalities of the electroencephalogram and high concentrations of HEOD in body fat. The concentrations of HEOD in body fat and also in blood and the electroencephalogram were found to be useful in diagnosis, and their value is discussed. -- Authors' abst.

367 Metabolism of Antimony Oxide Labeled with Sb-124. I. Klucik, et al Pracovni Lekar. 15, 323-329 (Oct. 1963). Czech.

Metabolism of antimony oxide was studied in 26 rats after intratracheal application and in 18 rats after peroral administration. After a single intratracheal application of $Sb_2^{124}O_3$ in a suspension of water solution of sodium carboxymethylcellulosa the Sb was resorbed and stored in the organs in a quantity one order higher than after single peroral administration. The highest percentage of activity was found in the liver and the blood. In the course of observation a significant fall of activity was registered in the liver but not in the blood. The elimination of Sb in the urine and stool may be expressed in square root functions. N,N-diethyldithiocarbamate sodium did not accelerate the elimination of Sb_2O_3 which was administered as a solution. -- Nuclear Sci. Absts.

368 Toxicological Properties of the Organophosphorus Insecticide Dimethoate. D.M. Sanderson and E.F. Edson. Brit. J. Ind. Med. 21, 52-64 (Jan. 1964).

The results are presented of extensive toxicological studies on the systemic organophosphate insecticide dimethoate (0:0-dimethyl S-(N-methylcarbamoylmethyl) phosphorodithioate), and compared with published results from other laboratories. It behaves a a typical indirect anticholinesterase, by conversion in the liver to at least four short-lived active metabolites, whose hydrolysis products are rapidly excreted, mainly in the urine. The acute oral toxicity of dimethoate is low in mammals but higher in avians. Dermal absorption is notably slow and dermal toxicity correspondingly low. Cumulative dosing of rats and guinea pigs gave no cholinesterase inhibition at 0.7 and 4 mg./kg./ day respectively. Dietary feeding to growing rats caused no cholinesterase inhibition at 0.5 mg./kg./day and no other effect at 10 times this dose. The main plant metabolite is identical with one formed in the liver, and comparative feeding tests with normal dimethoate and that partly metabolized in vegetation showed that residue analysis determined total hazard. Tests on humans, some with P-32-labeled material, confirmed that metabolism and urinary excretion are very rapid, that skin absorption is very slow, and that at least 2.5 mg., and probably up to 18 mg. could be ingested daily for at least 3 weeks without cholinesterase inhibition or other effects. Vapor hazards proved negligible Oral toxicity was not potentiated by any of 17 other insecticides. The earliest detectable effect of dimethoate poisoning was always erythrocyte cholinesterase inhibition. Symptoms of poisoning could be effectively treated by atropine but not by oxime therapy. No known cases of occupational poisoning have occurred during 5 years' commercial usage of dimethoate. -- Authors' abst.

INDUSTRIAL DUSTS

369 Simplified Rational Analysis of Filter Behavior. K.J. Ives. Proc. Inst. Civil Engrs. (London) 25, 345-364 (July, 1963).

Solutions of simplified equations were produced which enable the head loss, the quantity of deposit, and filtrate concentration for a filter to be calculated without the aid of an automatic computer. The range of calculations, the various types of suspensions (floc,

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