

- 57 Survey of Workers Exposed to Chlordane. W.I. Fishbein, J.V. White, and H.J. Isaacs. Ind. Med. & Surg. 33, 726-727 (Oct. 1964).

Fifteen workers, under constant, though minimal, exposure to chlordane over periods ranging from 1 to 15 years showed no evidence of injury to any of the organic systems subject to study. Since the exposure of these workers is greater than may be expected in the use of chlordane in the quantity and manner recommended and since they showed no signs or symptoms of toxicity, it may be stated that there is little, if any hazard from the use of chlordane when properly employed.

-- Authors' conclusion

- 58 DDT: A New Hypothesis of Its Mode of Action. R.D. O'Brien and F. Matsumura. Science 146, 657-658 (Oct. 30, 1964).

It is suggested that DDT and perhaps other chlorinated hydrocarbon insecticides owe their activity to the formation of a charge-transfer complex with a component of the nerve axon, with consequent disturbance of function. Experimental evidence is provided for the formation of two complexes with components of cockroach nerve; the complexes have been partially purified. Their formation is accompanied by an absorption in the 245 to 270-milli-micron range.

-- Authors' abstr.

- 59 Esterase Inhibitors as Pesticides. Because of Favorable Biological Properties They are Displacing Other Types of Established Compounds. J.E. Casida. Science 146, 1011-1017 (Nov. 20, 1964).

Thirty years of testing has yielded over 120 esterase inhibitors in current use for pest control. Several hundred million pounds of these organophosphates and carbamates are employed each year as insecticides and acaricides and, to a much lesser extent, as anthelmintic agents, nematocides, and herbicides. Systemics or chemotherapeutic agents for control of insect pests of plants and animals first became practical with the organophosphates. Compounds of lower mammalian toxicity and other favorable biological properties continue to appear and displace established compounds and broaden the use areas. Problems of resistance and residues in certain areas of insect control by chlorinated hydrocarbons will result in a further shift to esterase-inhibitors for pest control. Interpretation of the potential hazards of pesticides to man is dependent on the availability of fundamental information on their modes of action combined with use experience; this knowledge is available for the organophosphates and carbamates that act as acetylcholinesterase inhibitors.

-- Author's summary

INDUSTRIAL DUSTS

- 60 The Measurement in the Field of Pollution by Dust. D.H. Lucas and D. J. Moore. Intern. J. Air and Water Poll. 8, 441-453 (Sept. 1964).

A new design of gauge for measuring dust pollution at ground level is described. Its performance is more closely related to the nature of complaints of industrial pollution than the standard deposit gauge. It requires less manpower to operate and it gives some indication of the direction of origin of the dust pollution. It has been used experimentally in studying the effect of raising the height of the chimneys at East Yelland Power Station from 117-162 feet. The directional discrimination of the gauge has been demonstrated. The results indicate that dust pollution has been reduced both at short distances and large distances from the station but show little change at a distance of one-half mile.

-- APCA Absts.

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