

- 150 Observations on the Toxicity of Triarylphosphates. D. Henschler.
Zentr. Arbeitsmed. u. Arbeitsschutz. 10, 86-88 (Apr. 1960). German.

Triarylphosphates are essential for many technical purposes. The most frequently used type of preparation was at one time tricresylphosphate containing about 30% of o-cresol which in Germany caused many cases of irreversible paralysis particularly in the war and post-war periods. Much less toxic preparations of lower o-cresol content have now been introduced. For many purposes triarylphosphates in which cresol is more or less replaced by a homologous group can be used. The author, who has published observations on the toxicity of these preparations, discusses the relation between chemical configuration and toxicity and reports the results of some experiments on hens with a number of different aryl phosphates to determine the single dose which would induce signs of paralysis. Preparations tested were 2 tricresylphosphates (1 containing 26.7% and the other 3.3% o-cresol), 2 diphenylmonocresylphosphates, a diphenylmonoxylenephosphate and a product called a technical xylenol mixture. The last of these which contains 21.8% of 3,4-xyleneol, 32.8% of 3,5-xyleneol, and small amounts of o-cresol (1.6%) and phenol (0.7%) was found to have a very low toxicity as compared with that of the other tested preparations. It is considered that there is practically no danger of poisoning in using this material. -- Bull. Hyg.

- 151 The Moroccan Poisoning of 1959: Tricresylphosphate Myelopolyneuritis. H. Geoffroy, P. Pascal, A. Slomic and M. Benebadjl. Presse med. 68, 1474 (1960).

Ingestion of oil containing tricresylphosphate affected 10,000 victims in Morocco in the months of September and October 1959. Clinically the intoxication affected mainly the pyramidal tracts of the spinal cord but involved sensory fibers as well. The authors report the results of clinical, biological and electromyographic studies on a large number of these patients. Of particular interest among the laboratory investigations was the behavior of the serum cholinesterase activity which was markedly decreased on admission and showed a gradual rise subsequently. The accidental discovery of immediate improvement in motor paralysis following an injection of pilocarpine in one case prompted the treatment of 40 other patients by this drug. Clinical and electromyographic improvement was consistently observed in these patients but it was of short duration. No other form of treatment was associated with any demonstrable benefit. Various vitamins, singly and in combination, corticosteroids and atropine were ineffective, as were eserine, prostigmine and other drugs with an anticholinesterase action. It is anticipated that the finding of clinical, electrical and laboratory improvement following the administration of pilocarpine hydrochloride may lead to a better understanding of the mechanism of damage by tricresylphosphate. -- Can. Med. Assn. J. Absts.

INDUSTRIAL DUSTS

- 152 A Simple Mathematical Method for Evaluation of Data from Droplet Counts on Settling and Impaction Slides. A. Pfeiffer. Am. Ind. Hyg. Assn. J. 21, 526-528 (Dec. 1960).

Despite the development of a variety of instruments for assessing the sizes of droplets suspended in aerosol and spray clouds, a large amount of work is done currently by manually counting and sizing droplet images. Whether the images are produced by the light microscope, by projection of photomicrographs or droplet patterns on transparent slides onto screens, the investigator must adopt a uniform method for the evaluation of the data he gathers. This paper describes a simple mathematical method which may be used for this purpose.

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