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General Offices

February 26, 1958

Dr. Roger E. Hatton*

Your memo to EPWheeler - 1/14/58

Organic Research

TOXICITY OF OS-95

Y-58-4

Attached is a copy of the report from Younger Laboratories covering the toxicity investigation on the subject fluid. A summary of these data follows:

Oral Ingestion in Rats -- The Oral $LD_{50}$ was found to be 10,500 milligrams per kilogram with lower and upper limits of 9,295 to 11,865 milligrams per kilogram. Survival time was overnight to three days. The general symptoms developed were diarrhea, salivation, tremors, and coma. Autopsy revealed gastrointestinal inflammation and some liver discoloration due in part to congestion. This classifies the material as "practically non-toxic" from an oral ingestion standpoint.

Skin Absorption in Rabbits -- The skin Minimum Lethal Dose was found to be 625 to 1,250 milligrams per kilogram. Survival time was three to eleven days. The only toxis symptoms shown were loss of appetite, weakness and lethargy. In some of the animals, violent convulsions developed several hours before death. Autopsy revealed extensive hemorrhagic areas in the lungs and moderate kidney congestion. These data classify this compound as "slightly toxic" by skin absorption.

Skin and Eye Irritation in Rabbits -- The application of OS-95 to the intact skin of rabbits indicates that the compound is a moderate skin irritant, giving a score of 3.0 out of the possible 8.0. In the case of application to rabbits' eyes, only mild discomfort was noted and a score of 11.3 out of the possible 110.0 was reached. This indicates that the compound is only a mild eye irritant.

Vapor Inhalation in Rats -- Rats survived a six hour exposure to saturated atmospheres of OS-95 with no particular difficulties and no subsequent symptoms. The rats exhibited no particular unsteadiness and apparently ate and drank normally. This data indicates that the concentration of OS-95 vapors is only slightly irritating to rats exposed for six hours.

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The above information indicates that OS-95 is not a very seriously toxic product to handle and therefore no special handling precautions are necessary.

It is of interest to note the specie variation between the oral toxicity in rats and the skin absorption toxicity in rabbits. However, in either case the compound is only slightly toxic.

Jack T. Garrett

JTG:dh
Attachment
* Receive copy of report