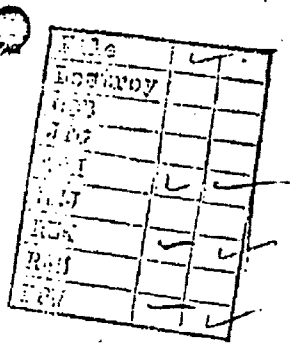
Medical Department - St. Louis

July 30, 1968

HB 40

Memo of 6/28/68 from T. Ishikawa - Tokyo

D. L. Press



In reply to Ishikawa's inquiry you may tell him the following

Acute Oral Minimal Lethal Dose

Rat - Greater than 29,460 mg/kg.

Rabbit - Greater than 19,640, but less than 29,460 mg/kg.

Toxic signs - All concentrations tested (4900 to 29,460 mg/kg.) produced moderately severe malaise lasting one to two days. The lethal doses produced diarrhea, followed by collapse shortly before death. The animals succumbed in coma. There were no significant blood changes. Gross examination revealed changes in the lungs such as edema, emphysema, congestion, and areas of hemorrhage. Urine occasionally contained blood.

Subacute Feeding Study

Rat - Each rat ingested daily approximately 1.08 grams of HB-40 (6680 mg/kg body weight) with its food and the study was continued for four months. Even though consumption of food was normal (22 grams per rat daily) the rate in gain of weight was subnormal. Histopathologic examination revealed no significant lesions.

HB-40 has been subjected to patch tests with 200 human subjects and was found to be neither an irritant nor a sensitizer.

Our experience in manufacturing these compounds has been completely free of any untoward effects in our employees. It should be pointed out, however, that we have little opportunity for exposure because of handling in closed systems except for any incidental handling at room temperature. In the latter case the low vapor pressure eliminates any exposure.

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We would expect that if HB-40 were heated to elevated temperatures, such as 300 - 350°F, there would be enough evolution of vapors to produce unpleasant and possibly irritating concentrations. Certainly, such exposures should be controlled by mechanical exhaust ventilation or the wearing of appropriate respiratory protective devices.

To the best of our knowledge there have been no reports of occupational disease or health problems involved in the use of this material.

William H. Hunt, Ph.D.

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