William H. Hunt - Medical Department

May 8, 1969

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Functional Fluid Formulation
(40% Aroclor 1242, 60% o-dichlorobenzene)
Acute Toxicity Screen

James D. Sullivan

The sample, as a 20% solution in corn oil, was classed as slightly toxic when administered orally to mixed sex rats. The acute oral LD_{50} was 1600 mg/kg. Most deaths occurred in 2 to 3 days. Toxic signs were reduced appetite and activity, increasing weakness, collapse, and death. Gross pathologic examination of those that succumbed revealed a mottled and discolored liver, hemorrhagic lungs, gaseous and inflamed intestinal tract, and in some discoloration of the kidney. Those that were sacrificed revealed discoloration of the liver and kidneys and gastrointestinal inflammation.

The undiluted sample was classed as mildly toxic when applied to and retained for 24 hours on the clipped intact skin of mixed sex rabbits. The acute minimal lethal dose was greater than 1260 but less than 2000 mg/kg. Time to death was 5 to 7 days. Toxic signs were reduced appetite and increasing weakness. Gross pathologic examination of those that succumbed were distended gall bladder, distended blood vessels to the intestinal tract, discoloration of the kidneys, and jaundiced liver. Gross examination of the survivors showed discoloration of the liver only.

The undiluted sample was classed as a mild irritant when applied to and retained for 24 hours on the clipped intact skin of mixed sex rabbits. Maximum irritation occurred at 24 hours of contact. The score was 2.3/8. At this time the sample was removed and 4 days later the skin was normal (0/8). Maximum irritation produced well defined erythema and barely perceptible edema.

The undiluted sample was classed as a slight eye irritant when instilled into the conjunctival sac and retained for 24 hours in the rabbit eye. Immediately after instillation there was considerable discomfort as evidenced by pawing at the closed lid eyes and squealing from pain. However, the maximum score at 1 hour of contact was only 0/110 and at 24 hours of contact 1.3/110. At this time the eyes were irrigated and 24 hours later they were normal 0/110. Maximum irritation produced slight erythema, edema, and discharge with no corneal dullness.

When male rats were exposed for 6 hours to the vapors of the sample, at ambient temperature, there were no deaths. The sample by this procedure was classed as practically non-toxic. No toxic signs were produced during the test nor through the 10 day observation period. Gross pathologic examination of the sacrificed animals revealed only slight lung congestion.

In case of accidental skin contact wash off with soap and water.

In case of accidental eye contact immediately flush out with water forcing the lids open if necessary. If irritation persists consult a physician.

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Toxicologist