Cyclohexane is a hydrocarbon of a type which falls between the aliphatic and the aromatic series, but in its toxicity it is much more closely related to the aliphatics In animal experiments, the damage from the lowest concentrations causing any effects is seen in the liver and kidneys and is not typical of the particular compound Especially, there is no sign of the damage to the blood-forming systems which is seen in benzene poisoning In chronic experiments, monkeys were not injured by concentrations of about 1200 ppm and rabbits were not injured by about 400 ppm

See *Hygienic Guide*

Cyclohexanol (Hexalin, Hydralin) is a volatile liquid having a menthol-like odor While the high boiling point limits somewhat the concentration of vapor which will be attained, exposure of men to the vapor has produced headache and eye irritation

There are no known cases of clear-cut human poisonings from its use In animal experiments, it has produced poisoning with changes in the brain, heart, kidneys, and liver The changes are about the same whether the compound is absorbed through inhalation or through application to the intact skin Minimal liver changes have been seen in the livers of rabbits after exposure to about 200 ppm but not after exposure to 150 ppm In men, eye, nose, and throat irritation was produced by a few minutes of exposure to 100 ppm

Cyclohexanone is a volatile liquid of high boiling point Exposure to cyclohexanone vapors at room temperature produced no acute effects in laboratory animals By application to the skin and by ingestion, the toxicity of cyclohexanone was slightly less than that of cyclohexanol, but of the same type and of the same order of magnitude It was observed that the absorption of this compound had a direct effect upon the excretion of glucuronic acid and of organic sulfates in the urine and that, if the same relation holds for man, the determination of these materials in the urine should be a useful measure of the extent of the exposure

See *Hygienic Guide*

Cyclopropane (trimethylene) has been rather extensively used in medicine as an anesthetic since about 1929 A concentration of approximately 6 per cent produces light anesthesia in humans, and the deepest surgical anesthesia is produced by about 25 per cent If the oxygen concentration is kept at 20 per cent or above, there is arrest of respiration with about 40 per cent of cyclopropane, and irregular heart rhythm and fibrillation are likely to occur at about the same concentration The changes after repeated administrations seem to be edema and fatty changes in the liver, brain damage, and some damage to the heart

2,4-D (2,4-dichlorophenoxyacetic acid) is a herbicide that is moderately toxic on ingestion, the main effect being irritation of the digestive system, with some liver and kidney damage and sometimes congestion of the lungs

All the data on poisonings are from experiments upon laboratory animals, inasmuch as there are no cases known of poisonings of humans in the manufacture or application of the material Also, there are no known cases of direct poisoning of domestic animals, although there have been some indirect cases where domestic animals have eaten the products of plants which had been killed and had become toxic as the result of changes within the plant material

DDT (2,2-bis [p-chlorophenyl]-1, 1, 1-trichloroethane) has been used extensively for several years as an insecticide, and relatively few cases of intoxication have resulted It is known to be a poison to the central nervous system and to the liver Ingestion of a toxic dose is followed by dizziness, nausea, muscle tremors, and convulsions In experimental animals it has also caused ventricular fibrillation Experiments have indicated that man is more susceptible than the dog to DDT poisoning

DDT can be absorbed by ingestion, inhalation, or application of an oil solution directly to the skin Rabbits have been acutely poisoned by a 5 per cent oil solution of DDT applied to the skin

In the practical application of DDT as an insecticide, experience has been good Reported cases of human poisoning have resulted from accidents rather than from proper application of the material Contacts with the oil solution should be avoided, and with