Scope of the Present Investigation
Health hazards created by chemical substances have become a great concern to the public. Auramine O, an yellow dye is clandestinely incorporated as a colouring agent in milk, raw pulses and miscellaneous food products. It is also misused in the name of "Cow Dung Powder" for swabbing floors particularly by women folk in several districts of Tamil Nadu State in India. Of late, its abuse as a suicidal agent has been well established. Further, auramine O seems to be a potent carcinogen.

The wide spread exposure to auramine O in human beings, particularly in women necessitated toxicological evaluations as information regarding the mechanism of toxicity is scanty. Hence the present study has been designed for a better understanding of the effects of auramine O exposure in experimental animals. Biochemical changes supported by histological observations could well explain the mechanism of toxicity of this dye and the present approach has been in this direction.

The objective and experimental design of the present study have been as follows:

a) Determination of the oral LD\textsubscript{50} value of auramine O in female Wistar rats and choice of 1/20\textsuperscript{th} of the LD\textsubscript{50} value for subchronic exposure studies.

b) Evaluation of the activities of marker enzymes, microsomal enzymes and mitochondrial enzymes in liver, kidney and small intestine.
c) Assessment of the status of lipid peroxidation, non-enzymatic and enzymatic antioxidants in blood/plasma, liver, kidney and small intestine.

d) Estimation of the nucleic acid and protein contents in tissues.

e) Histological examination of liver, kidney and small intestine.