

Acute Toxicity and Respiratory Responses in Freshwater Fish, *Labeo Rohita* exposed to An Agrochemical Indoxacarb

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ABSTRACT/RESUME

Abstract: In the present study, an attempt has been made to analyze the toxicity of the Indoxacarb on the freshwater fish *Labeo rohita*. The toxicity tests were conducted to choose the mortality range from 10% to 90% for 24, 48, 72 and 96 h in static system. Finney's probit analysis, (Finney, 1971) was followed to calculate the LC50 values. Experimental fish were exposed to different concentrations of Indoxacarb for different hours, percent mortality was recorded. The 96 h LC50 value of toxicant to the fish were found to be 0.0521 mg/L. Throughout the experimental period, the fish showed severe respiratory distress and rapid opercular movements leading to the higher amount of toxicant uptake, increased secretion of mucus higher ventilation volume, decrease in oxygen uptake efficiency, labored breathing and engulfing of air through the mouth Behavioral patterns were observed in during exposure period, test organism showed normal behavior in control group but jerky movements, hyper secretion of mucus, opening and closing of mouth for gasping, losing scales, hyperactivity were observed experimental group. The results suggest that indoxacarb is considered as hazardous pesticide in common carp with 96 hrs LC50 value. Also, the mortality rate increased with increase in the concentration of pesticide. All the studies mentioned above indicate a considerable effect of insecticides on oxygen consumption in different species of fish in lethal as well as sub lethal concentrations.
