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Effects of Chloropyriphos on gills of *Rasbora daniconius*

Fish are one of the major components of aquatic ecosystems and their gills are delicate structures directly involved as sites of respiration, osmotic regulation, acid base balance and nitrogen waste excretion. Variety of pollutants including pesticides cause different types of gill lesions that would exert difficulties in the normal functions and behaviors making them vulnerable to predation, less competitive, more susceptible to adverse environmental conditions and finally decline in populations.

Present study is focused on sublethal effects of a widely used Organo – phosphate pesticide foe pests of paddy – Chloropyriphos on the gills of *Rasbora daniconius* commonly found in fresh water habitats.

LC_{50} value of Chlorpyriphos for *Rasbora daniconius* for 72 h was found to be 0.22 mg/L. Rasbora were subjected to different doses (0.0005 mg/L, 0.00125 mg/L, 0.005 mg/L, 0.0075 mg/l and 0.6 mg/L) of Chloropyriphos. Comparative study of types of gill lesions and their severity were performed using histological sections of the gills obtained from the exposed fish.

Eleven different gill lesion types were observed and only 3 -4 lesion types were found in a single individual. Number of severe lesion types increased with the higher doses. The results also revealed that Rasbora gills were very sensitive even to a 100 folds dilution of value LC_{50} and sublethal concentrations could also exert mortality if continuously exposed to the pesticide.