

D-48: Influence of salinity and pH on survival of juveniles of *Monodactylus argenteus*

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The tolerance of juveniles of *Monodactylus argenteus* (9.73 ± 2.69) collected from Negombo estuary and acclimated to various salinities (freshwater, 15, 20, 25, and 30 ppt) and exposed to abrupt or gradual increase in salinity was determined under laboratory conditions. Similarly, the tolerance of juveniles of *M. argenteus* (in the same weight range) acclimated to pH 7 and exposed to abrupt or gradual increase and decrease in pH was also determined. Time to death of individual fish in the different test salinities and pH was recorded over a period of 7 days. Fish were considered dead when respiratory movements of the opercula stopped and there was no response to touch.

The levels of salinity and pH tolerance were studied using the indices : median lethal salinity (LS_{50}), median lethal pH (LpH_{50}), median lethal time (LT_{50}) and ultimate upper incipient lethal salinity and pH.

No mortality occurred when fish were transferred from freshwater to 25 ppt while 15% mortality was recorded at 30 ppt. LT_{50} decreased with increase in salinity. LS_{50} increased with increase in acclimation salinity.

Median acidic lethal and median basic lethal pH for the juveniles of *M. argenteus* that was acclimated at pH 7 were 4.0 and 10.0 respectively. LT_{50} decreased with increasing/decreasing pH from pH 7. At pH 3.0 and 11.0 all the juveniles were found to die within 30 min.

The results showed that though juveniles of *M. argenteus* inhabit brackish water, they could be kept in freshwater as an aquarium fish with 100% survival. One of the major reasons for mortality of *M. argenteus* in aquaria was low pH which occurred due to poor water management.

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