

## Effect of Different Zeolite Concentrations on Survival and Growth of Silver Barb *Barbodes gonionotus* (Bleeker) Larvae and its Role on Water Quality



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Intensive marine and brackish water shrimp farms commonly use large quantities of zeolites in ponds with the aim of removing ammonia through ion exchange, providing physical cover over sediments to prevent leaching of metabolites into the water column, removing suspended solids, and improving water colour and diatom blooms. Zeolites have the capacity to remove ammonia and other nutrients/metabolites from fresh waters by ion exchange and absorption. Larvae of silver barb *B. gonionotus* were stocked at  $25L^{-1}$  in 10L tanks and were offered six various concentrations of zeolite including 0, 2, 4, 6, 8 and 10 g/liter in triplicate for 18 days.

Larval growth and survival were generally higher for those treated by different zeolite concentrations. Significant lower survival and growth were recorded on larvae without zeolite treatment. Negative correlation was found between Ammonia concentration and zeolite level. Lower ammonia in higher zeolite treated tanks, indicated the strong positive effect of zeolite on water quality. Results of this study demonstrated the high potential of zeolite in larviculture and hatchery production of freshwater fish industry in Malaysia.

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