

Abstract:

In this study, survey the effect of anesthetic essential oil of lavender (*Lavendula officinalis*) on *Schizothorax zarudnyi* was investigated. Therefore, 260 Snow trout (*Schizothorax zarudnyi*) juveniles with an average total weight and length 58.69 ± 1.50 g and 20.77 ± 1.16 cm, respectively, were anesthetized in four group treatment including, 0, 200, 300 and 400 ppm essential oil of lavender. The experiment carried out base on bath method in order to determine sedative position and anesthetic dose of Lavender essential oil. Sampling of blood serum for evaluation of AST (Aspartate Aminotransferase), ALT (Alanine Amino transferase) and ALP (Alkaline Phosphatase) enzymes activity and sampling of Kidney, Liver and Gill tissues histopathological effects was done in two times, 10 minutes after anesthesia and 24 hours after anesthesia. The results showed that the essential oil of lavender in concentration of 300 ppm induces general anesthesia. Average induction time below 3 min was at 300 ppm and recovery was concentration independent and lasted for about 3min. Also the results showed that by increasing the concentration of anesthesia inducing substance, anesthesia inducement get faster and the recovery time of anesthesia increases. Comparison of AST, ALT and ALP enzyme activities ($p < 0.05$) between all group treatment did not show significant difference. Histopathological result suggested that the concentration of 200 ppm lavender was optimum for sedative position and 300 ppm lavender was proper for anesthesia in Snow trout without sideeffect and it can recommended that use this concentrations of lavender essential oil in aquaculture activities without side effect or probably damages.

Keywords: *Lavender* essential oil, Anesthesia, *Schizothorax zarudnyi*, Histopathology, Enzyme activity.



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Subject:

The Effect of Anesthetic Lavander (*Lavendula officinalis*) essential oil on histopathological and blood serum anzyms of Snow trout (*Schizothorax zarudnyi*)

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