



RESEARCH ARTICLE.....

Effectiveness of clove oil as an Anesthetic on Mozambique tilapia (*Oreochromis mossambicus*)

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ABSTRACT..... Anesthesia in aquaculture is generally used during sampling, weighing, disease diagnosis and transportation. Total 99 fish (mean length 6.55 cm \pm 0.04; mean weight 3.64 g \pm 0.05) were used for this experiment. This experiment was carried out in triplicate using ten different concentration of clove oil (10, 20, 30, 40, 50, 60, 70, 80, 90, 100 mg/l) along with control (without clove oil). For the experiment, 1 litre tanks were used as induction tank and 10 litre tanks were used as recovery tank. Clove oil is not soluble in water so stock solution was prepared using absolute ethanol in the ratio of 1:10 before experiment and directly added to induction tank and induction time was measured. The fish were then transferred to recovery tank and three different stages of recovery were measured. Clove oil concentration 10 mg/l did not produce any stage of anesthesia while 20 mg/l produced only two stages of induction and recovery. As the concentration of clove oil increased from 30 mg/l to 100 mg/l, time of induction decreased and time of recovery increased. 100 mg/l was found to be an ideal concentration as it produced induction in less than 3 min. The result of this experiment suggested that clove oil can be used as an effective anesthetic on tilapia which produced minimum stress without mortality.

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