

Acute Toxicity and the Effects of dichromate potassium (K₂Cr₂O₇) in sobaity seabream (Sparidebtex hasta)

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Abstract : In this study, 96h LC50 values of dichromate potassium (K₂Cr₂O₇), a highly toxicant heavy metal on sobaity seabream, Sparidebtex hasta of average weight mean weight 3.24 g; mean length 5.35cm was determined. At first, for rang finding test, fish were exposed to K₂Cr₂O₇ at several selected concentrations 5, 10, 20, 30, 40, 50 and 60 mg/L, then fish exposed to five concentrations control, 40, 45, 50 and 55 mg/L of K₂Cr₂O₇ for LC50-96h. The experiment was carried out in triplicate, and 21 fish per each treatment, Physicochemical properties of water were measured continuously throughout the experiment. The temperature, pH, dissolved oxygen and salinity were 26 °c, 7.05, 8.84 mgO₂ L-1 and 37.5 ppt, respectively. A number of mortality and behavioral responses of fish were recorded after 24, 48, 72 and 96 h. LC50 values were determined with probate analysis. The 96 hour LC50 value of K₂Cr₂O₇ to the fish was found to be 48.82 ppm. In addition, behavioural changes increased with increased concentration. The results obtained in this study clearly revealed the fact that it is necessary to control the use of a heavy metal such as dichromate potassium.

Keywords : marin fish- lc50, dicromat potassium, lc50, mortality

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