

Short time effect of cadmium on juveniles and adults of Java medaka (*Oryzias javanicus*) fish as a bioindicator for ecotoxicological studies

ABSTRACT

Acute toxicity of cadmium (Cd) on Java medaka (*Oryzias javanicus*) fish was studied. To obtain the results, the experiments were carried out in 3-liter aquariums (15-20 fish for each aquarium) with static condition based on O.E.C.D method with 5 treatments, and 1 blank in two repetitions. During the experiment, water physico-chemical parameters were pH = 7.7 to 7.9, salinity = 19.3 to 19.7 ppt, temperature = 29.1 to 30.8°C and conductivity = 13.54 to 13.94 mS/m. On the basis of obtained results, the LC50-96 h for Cd were determined 6.02 (5.83 to 6.21) mg/L for juveniles and 6.63 (6.31 to 6.95) mg/L for adults, respectively. Also, the MAC (maximum allowable concentration) values for Cd on *Oryzias javanicus* juveniles and adults were determined at 0.60 mg/l for juveniles and 0.63 mg/l for adults. These results will be helpful for future ecotoxicology studies based on heavy metals pollution in estuary areas.

Keyword: Cadmium; Java medaka fish; LC50; MAC; Ecotoxicology; Estuary.