

Acute Toxicity of Atrazine Herbicide on Caspian Kutum, *Rutilus frisii kutum* larvae

Authors : Zahra Khoshnood, Reza Khoshnood

Abstract : Pesticides and drugs used in agriculture and veterinary medicine may end up in aquatic environments and bioaccumulate in the food chain, thus causing serious problems for fauna and human health. For determination of the toxic effects of atrazine herbicide on Caspian kutum, *Rutilus frisii kutum* larvae, the 96-h LC50 of atrazine was measured for newly hatched larvae as 18.53 ppm. Toxicity of atrazine herbicide on Caspian kutum larvae was investigated using concentrations: 9.25 ppm, 4.62 ppm and 2.31 ppm for 7 days. Comparison of the length, weight and condition factor showed that no significant differences between atrazine exposed and control groups. The concentration of Na⁺, K⁺, Ca²⁺, Mg²⁺, and Cl⁻ in whole body of larvae in control and atrazine exposure groups were measured and the results showed that concentrations of all these ions is higher in atrazine exposure group than control group. It is obvious from this study that atrazine negatively affects osmoregulation process and changes ion compositions of the body even at sub-lethal concentration and acute exposure but have no effects on growth parameters of the body.

Keywords : atrazine, caspian kutum, acute toxicity, body ions, lc50

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