Determination of lethal concentration (LC96h) of hydro alcoholic extract of *Zataria multiflora* and its effects on differential count white blood cells of Persian sturgeon (*Acipenser persicus*) fingerlings

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Abstract
Today, along with the development of sturgeon farming in the country, the need for attention to the health of aquatic animals and the use of substances of natural origin are considered essential in the fight against pathogens. This study carried out to determine LC96h for hydro alcoholic extracts of *Zataria multiflora* on Persian sturgeon (*Acipenser persicus)* fingerlings for future application studies. Fingerlings were 3.22±0.51g in weight and 9.17±0.65cm in total length. In order to study the effects of these extracts, 240 fingerlings selected in 7 treatments and one control group (3 replications for each treatment) was used. During the experiment the temperature, dissolved oxygen, pH, nitrite, nitrate, ammonium, electric conductivity and water hardness were measured throughout the study. This experiment conducted according to O.E.C.D method for 96h period. So, using Probit Analysis, the linear regression equation drawn, then different lethal concentrations measured. In this survey according to Probit Analysis, LC_{10}, LC_{50} and LC_{90} for hydro alcoholic extract of *Zataria multiflora* was 431.12, 766.65, 1363.64 mg/l, respectively. Differential counts of white blood cells indicated a significant difference in the amount of lymphocytes, neutrophils, and eosinophils between treatments and control group ($p<0.05$).

Keywords: Hydro alcoholic extract, *Zataria multiflora*, Persian sturgeon, Lethal concentration, White blood cells.