The effect of salinity on serum level of some electrolytes, cortisol and glucose in shirbot fingerlings (*Arabibarbus grypus*)

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Abstract

Accurate recognition of shirbot blood parameters can be increase keeping up and breeding of these valuable fish. The goal of this study is to find the effect of different salinity stress on some electrolyte, cortisol and glucose in reared fingerling shirbot (*Arabibarbus grypus*) fish for determine the suitable condition and physiologic tolerance during transforming into the waters with different levels of salinity. The treatments include four different salinity concentrations :< 5 P.P.T, 10 P.P.T, 15 P.P.T, fresh water. Total number of fish: 120, mean weight: 30±5, mean temperature: 26±2 Ċ, pH: 7.5 - 8. After 30 days' blood samples were collected. then, serum electrolyte (Na, K, P, Ca), cortisol and glucose were measured. Finally, the results showed that there was significantly difference of the electrolyte, cortisol and glucose parameters regarding to effect of salinity stress on fishes ($P<0.05$). The maximum and minimum values of the electrolyte, cortisol and glucose were in 15 P.P.T and control. The results indicate that biochemical factors are under the influence of water salinity, and ions concentration in blood are dependent on ions concentration in water.

Key words: Salinity, Electrolyte, Cortisol, Glucose, *Arabibarbus grypus*