Comparison of some blood serum ions of rainbow trout (*Oncorhynchus mykiss*) in fresh, brackish and salt water

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Abstract

In this study, the effects of different salinity on some of the serum ions of *Oncorhynchus mykiss* fry with the mean weight of 80 g which gradually exposed to salt concentrations of fresh, brackish and salt water during a 5-month period. At the end of the experiment, Blood sampling was performed in caudal vein of 180 fish were apparently healthy at the average weight of 250 g and serum was separated with centrifuge machine. Calcium, Sodium, Potassium and Phosphorus was measured with the spectrophotometer. No significantly affect between Sodium, Potassium and Phosphorus concentration was detected in the different environment ($p>0.05$). But, the concentration of Calcium in the salt water was significantly higher than of fresh and brackish water ($p>0.05$). In conclusion, the results of this study indicated that increase of salinity levels does not affect the concentration of Sodium, Potassium and Phosphorus concentration in serum of rainbow trout, but increases the level of calcium concentration in the serum of this species.

Keywords: Salinity, Blood serum, *Oncorhynchus mykiss*