Determination of Seasonal variations in the liver and muscle fatty acid composition of Benni Fish (*Mesopotamichthys sharpeyi*) in Shadegan Wetland

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Abstract

In this study, Seasonal variations in the liver and muscle fatty acid composition of *Barbus sharpeyi* were determined. The samples were collected in the middle month of each season during 2014-2015 and Total fatty acid compositions were investigated by a gas chromatographic method. The most abundant fatty acids in the (SFAs) of the liver and muscle were at the highest in the winter and not significant difference with summer, autumn ($P \geq 0.05$). The total monounsaturated fatty acids (MUFAs) were at the highest in the autumn for liver and muscle ($P<0.05$).The n-3 PUFA to be at the highest levels in the spring and summer for liver and muscle, respectively. Ratio of n-3 to n-6 fatty acids were at the highest in the spring for muscleand not significant difference with summer. In total, the highest amount of PUFA and omega-3 fatty acids in muscle and liver tissue were obtained in spring and summer, respectively.

Keywords: *Mesopotamichthys sharpeyi*, liver, muscle, fatty acid composition, season, Shadegan Wetland.