Comparison of the chemical composition and fatty acids profile of wild carp (*Cyprinus carpio*), farmaed carp and wild farmed carp

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Receive date: 2013.11.06
Acceptant date: 2014.02.19

Abstract
The present paper aimed at evaluating nutritional value and fatty acid profile of muscle textures of the Caspian Sea wild carp, farmed wild carp and farmed carp. No significant differences were found between chemical composition indices (total lipid, crude protein, moisture) ($p>0.05$). However, ash contant was significantly higher in wild carp compared with farmed wild carp. There were not significantly differences of SFA, MUFA, PUFA, ω–3, ω–6, EPA+DHA, ω-3/ω-6 and PUFA/SFA between farmed wild carp and farmed carp. But following determination of fatty acid profiles in the Caspian Sea wild carp and farmed wild carp, fatty acid compositions in three groups of fish were found to be significantly different in terms of SFA, MUFA, PUFA, ω–3, EPA+DHA, ω-3/ω-6 and PUFA/SFA. PUFA, ω–3, ω–6, EPA+DHA, ω-3/ω-6 and PUFA/SFA were significantly higher in the Caspian Sea wild carp. Considering exceeding PUFA/SFA and ω-3/ω-6 ratios in Caspian Sea wild carp, farmed wild carp and farmed carp, all fishes were considered invaluable fisheries and nutritional resources. It is noteworthy that Caspian Sea wild carp is more nutritious than farmed counterparts thank to its higher rates of PUFA, ω-3, EPA+DHA, ω-3/ω-6 and PUFA/SFA.

Keywords: Farmed carp, Farmed wild carp, Caspian Sea wild carp, Chemical composition, Fatty acid profile.