

NUTRITIONAL VALUE OF SEVERAL COMMERCIALY IMPORTANT RIVER FISH SPECIES FROM THE CZECH REPUBLIC

Sarvenaz Khalili Tilami¹ – Sabine Samples³ – Tomáš Zajíc² – Jakub Krejsa²
Jan Másilko² – Jan Mráz²

¹Department of Microbiology, Nutrition, and Dietetics, Czech University of Life Sciences Prague, Kamýcká 129, 165 00, Praha 6, Suchbát, Czech Republic

²Institute of Aquaculture and Protection of Waters, University of South Bohemia in České Budějovice, Faculty of Fisheries and Protection of Waters, South Bohemian Research Centre of Aquaculture and Biodiversity of Hydrocenoses, České Budějovice, Czech Republic

³Department of Molecular Sciences, BioCenter, Swedish University of Agricultural Sciences, Uppsala, Sweden

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ABSTRACT

Proximate and fatty acid (FA) composition of seven freshwater fish species from the Czech Republic were examined. Moreover, the index of atherogenicity (IA) and the index of thrombogenicity (IT) were calculated from the obtained data. These two indices along with the total content of the essential n-3 FAs, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) as well as the ratio of n-6/n3 FAs, provide good indicators for the nutritional value of the fish.

The studied species had been selected owing to the limited amount of information about their nutritional composition available. Furthermore, they are not typically subject to aquaculture, being almost exclusively obtained by angling. The protein content was relatively stable in all species (17.1 ± 1.55 to 19.2 ± 2.20 g/100 g). The content of carbohydrates ranged from 0.02 ± 0.1 to 0.99 ± 0.0 g/100 g and ash from 1.08 ± 0.20 to 2.54 ± 1.57 g/100 g. As expected, a high variability was observed in the fat content (0.74 ± 0.04 to 4.04 ± 0.81 g/100 g) and the FA composition, as well as the contents of EPA and DHA. IA and IT were close to the values stated for the Eskimo diet, indicating a high nutritional value with a positive effect for human health.

Keywords: Eicosapentaenoic acid, Docosahexaenoic acid, Nutritional value, Index of atherogenicity, Index of thrombogenicity

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Contact Information: Sarvenaz Khalili Tilami, Department of Microbiology, Nutrition, and Dietetics, Czech University of Life Sciences Prague, Kamýcká 129, 165 00, Praha 6, Suchbát, Czech Republic