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Fatty acid composition of Bulgarian Black Sea fish species

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Abstract The fatty acid compositions of three Black Sea fish species turbot *(Pseta maxima),* red mullet *(Mullus barbatus ponticus)* and garfish *(Belone belone*) were investigated. This species are considered as preferred for consumption in Bulgaria. Lipid extraction was done according to the Bligh and Dyer method. The fatty acid composition was determined by GC/MS. The saturated fatty acids amounts were 38.32 % for turbot, 35.44 % red mullet and 42.90% for garfish. Monounsaturated fatty acids were found in lowest level in comparison with other groups for garfish (23.65%) and turbot (24.85%) while for red mullet they have a highest value – 37.56%. Omega 3 polyunsaturated fatty acids as eicosapentaenoic (C 20:5 omega 3, EPA) and docosahexaenoic (C 22:6 omega 3, DHA) acids were found in highest levels in turbot (22.26%) and garfish (21.80%) and in lowest values of red mullet (9.35%). The results showed that the fish examined are good source of omega 3 polyunsaturated fatty acids, resulting in a very favourable omega 3 / omega 6 ratios, especially in turbot and garfish.

Keywords: Black Sea fish, fatty acids, PUFA, GC/MS

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