ISSN: 2458-8989

Natural and Engineering Sciences

Supplement, 2017, 2 (3): 30

PROXIMATE COMPOSITION AND FATTY ACID PROFILE OF PUFFERFISH (*LAGOCEPHALUS SCELERATUS*) CAUGHT FROM MERSIN BAY

Ali Rıza Köşker[1], Fatih Özoğul[1], Mustafa Durmuş[1], Yılmaz Uçar[1], Yeşim Özoğul[1], Deniz Ayas[2]*

[1] Faculty of Fisheries, Çukurova University, Adana, TURKEY
[2] Faculty of Fisheries, Mersin University, Mersin, TURKEY
*Corresponding author: ayasdeniz@mersin.edu.tr

Abstract

Pufferfish, which have been known to be highly toxic for a long time is very popular species in demand, especially in far eastern countries; in Japan, in particular because of their traditional status although they can cause death. Even though there have been cases of Tetrodoxin (TTX) poisoning for centuries in this country, pufferfish is accepted as delicious seafood. Pufferfish has been seen very often in the Mediterranean countries for a decade as a result of lessepsian migration. Silver-checked toadfish *Lagocephalus sceleratus* (Gmelin, 1789) has negative effects on local species, fishing and public health. In this study, the seasonal and sexual changes in nutritional composition and fatty acids of muscle tissues were investigated. As a result of our study, it was determined that protein, lipid, water and TMS levels of *L. sceleratus* were 20.66-21.60%, 0.61-1.66%, 76.05-77.30 and 1.23-1.54% respectively. 21 different fatty acid species were detected in the muscle tissues of the pufferfish. As a result of the research, it was found that the fatty acids detected at high levels were palmitic acid (C16: 0), stearic acid (C18: 0), oleic acid (C18: 1n9), vacenic acid (C18: 1n7), linoleic acid (C18: 2n6) (C20: 4n6), eicosapentaenoic acid (EPA, 20: 5n3), docosadienoic acid (C22: 2 cis) and decosahexaenoic acid (DHA, 22: 6n3). If this type of toxin were not available, it would be a particularly nourishing seafood, especially in terms of protein content and unsaturated fatty acid content.

Keywords: *Lagocephalus sceleratus*, proximate, fatty acid, Mersin Bay

Acknowledgements: This study has been conducted as a part of the research project “The Investigation of Nutrient Components, Tetrodotoxin (TTX) and Heavy Metal Levels in the *Lagocephalus spp*. Pufferfish Living in Eastern Mediterranean Coasts” with the project number FDK-2016-5578 supported by the Scientific Research Projects Coordination Unit of Çukurova University.