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56th MEETING OF THE SERBIAN CHEMICAL SOCIETY

Book of Abstracts

Niš 7. i 8. juni 2019.

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Radovi (obima od najmanje četiri stranice)
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Information on this is placed on the right-hand side,
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Grant Cerificates given by Poster prize award FoodEnTwin committee composed of the following memebers: Prof. T. Cirkovic-Velickovic, prof. J.Mutic, prof. M. Gruden

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HTH P 3

Određivanje toksičnih elemenata (žive, kadmijuma, olova i arsena) u uzorcima školjki

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Morski plodovi imaju visoku nutritivnu vrednost, ali sa druge strane postoji rizik od kontaminacije toksičnim elementima. Sadržaj As, Cd, Hg i Pb je određen u četiri vrste školjki *Ruditapes philippinarum* (Manila clam, MC), Y*esso scallop* (YS), *Tegillarca granosa* (TG) i *Anadara broughtonii* (AB) kupljene u Incheonu, Koreja. Uzorci su analizirani induktivno spregnutom plazmom - masenom spektrometrijom (ICP-MS) nakon mikrotalasne digestije. Izračunati su dnevni/nedeljni unosi za ove elemente u mg/300 g uzorka. Ukupan sadržaj As (neoganski i organski) u svim vrstama je bio veći od dozvoljenog limita preporučenog od Svetske zdravstvene organizacije (WHO). Procenjeni dnevni unosi ostalih elemenata (Hg, Cd i Pb) su niži od maksimalnih podnošljivih granica (MDI) koje je odredila Evropska agencija za bezbednost hrane (EFSA) što ukazuje da nema rizika za konzumente.

Determination of toxic elements (mercury, cadmium, lead and arsenic) in shellfish samples

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Bivalve molluscs, which include mussels, oysters and clams, have high nutritional value. On the other hand, seafood may also contain harmful contaminants and other undesirable substances such as mercury and persistent halogenated compounds. Four species of bivalve molluscs *Ruditapes philippinarum* (Manila clam, MC), *Yesso scallop* (YS), *Tegillarca granosa* (TG) and *Anadara broughtonii* (AB) were bought in Incheon, Korea, in order to determine content of As, Cd, Hg, and Pb and consequently, to estimate the health hazards associated to dietary intake. The samples were analyzed by inductively coupled plasma mass spectrometry (ICP-MS) after microwave digestion. All species showed As content higher than the maximum tolerable limit specified by EFSA. Estimated daily intake of Hg, Cd and Pb from consumption of 300 g was very low and hence poses no toxicological risk.

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