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Mercury content in tuna fish commercialized in Galicia (Spain)

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Mercury is a toxic trace metal that can accumulate to levels that threaten human and environmental health. Seafood is considered as the main source of mercury exposure for the general population. In this study, contents of total mercury have been determined by ICP-MS spectrometry, in highly consumed seafood products, such as fresh and processed tuna. 110 samples purchased from the supermarkets of Galicia (NW Spain) were processed. Mercury was present in all our samples analyzed, only one of the samples of fresh tuna (1.07 mg kg⁻¹ w. w.) slightly surpassed the maximum permissible level for Hg in the EU of 1 mg kg⁻¹ w. w. Average mercury concentration on fresh tuna was 0.765 mg kg⁻¹ w. w., showing statistically significant differences ($p < 0.01$) with regard to processed tuna which mean was lower 0.305 mg kg⁻¹ w. w. with a range from 0.080 to 0.715 mg kg⁻¹ w. w. Data were compared with those reported by other research from Spain and other countries. Considering the three type of preparation-packaging media, the total Hg content was in order: olive oil>natural>pickled sauce, statistically significant differences ($p < 0.01$) only has been found between pickled sauce and the other two preparations. According to the recommendation of the ASEAN for adults and children, the EU regulation and the consumption of tuna in Spanish population, the Hg levels obtained in this study pose no risk to consumer health. However, more work is necessary in relation to exposure to Hg from other sources.

Biography

Ricardo Núñez Losada has completed his degree in Veterinary Medicine from the USC, where he has conducted PhD courses obtaining the investigating sufficiency and is currently pursuing his PhD. He has carried out several stages in German research centers. He has also worked on Food Safety in canning industry.

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