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"STUDY ON THE MERCURY CONTENT OF FISH AND SEA FOOD IN IRAN"

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Abstract:

In this investigation, the mercury content of different samples of Persian Gulf shrimp and fish, Caspian sea fish and the samples of fish from Bandar Pahlavi lagoon, Zarjoub river near Rasht, Zayandehroud river near Esfahan, and Karadj river near Tehran were measured by flameless atomic absorption, cold vapor-technique, using standard addition method. The main purpose of this study was to investigate the presence and the extent of mercury contamination of fish and sea foods, either due to the natural geological existence of mercury compounds in the area of investigation or due to industrial pollution. The result of this study showed that the mean value of mercury content of 100 different samples of Persian Gulf shrimp was 0.24 mg/kg and the average amount of mercury in the samples of different species of Persian Gulf fish was 0.14-0.19 mg/kg and in canned tuna fish was 0.30 mg/kg. The mercury content of the samples of different species of Caspian Sea fish was between 0.07-0.51 mg/kg, the highest value was 0.51 and 0.36 mg/kg which was found in *Rutilus-frisikutum* and *Esox lucius* respectively, and the lowest amount of mercury was found in *Mugliauratus* (0.07 mg/kg). This study was also made on the different species of fish caught from Bandar Pahlavi lagoon which collects the water from some rivers in the northern part of the country and therefore any kind of pollution in these rivers would be brought into this lagoon. The mercury content of different species of fish of Bandar Pahlavi lagoon was found to be 0.04-0.51 mg/kg. The mercury content of fish from Zarjoub river near Rasht, Zayandehroud river near Esfahan and Karadj river near Tehran was 0.07-0.23, 0.19, 0.05 mg/kg respectively. Considering the results of this investigation and the acceptable limit of mercury in fish which is 0.5 mg/kg in most countries it seems that at the present time, mercury contamination of fish and sea food is not a hygienic problem in Iran.

Keywords:

[Mercury content](#) . [Persian Gulf shrimp and fish](#) . [Caspian sea fish](#)

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