

Comparison of arsenic levels and Hazard Quotient (HQ) in eight species of marine fish in Khuzestan province

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Abstract

In this study, arsenic concentration and hazard quotient (HQ) in eight species of marine fish in Khuzestan province including *Epinephelus coioides*, *Acanthopagrus latus*, *Platycephalus indicus*, *Cynoglossus arel*, *Pampus argenteus*, *Tenualosa ilisha*, *Liza macrolepis* and *Liza klunzingeri* were studied. This research was conducted in 2020. 15 fish were prepared from any of the different or fish landing places in Khuzestan province and after biometry of muscle tissue, the amount of arsenic was measured by atomic absorption method. The results showed that the highest concentration of arsenic was measured in *Platycephalus indicus* muscle (1.46 ± 0.44 mg / kg) ($P < 0.05$). The lowest concentration of arsenic was measured in *Platycephalus indicus* muscle (0.20 ± 0.10 mg / kg) ($P > 0.05$). The concentration of arsenic did not significant differences in different species ($P < 0.05$). The hazard quotient (HQ) was less than one in all studied species. Compared to world standards, arsenic concentrations were lower than of WHO, FDA, UK (MAFF), NHMRC standards. Due to the concentration of arsenic and the hazard quotient (HQ) of feeding the studied fish, in terms of arsenic concentration, there is no risk to human health.

Keywords: Arsenic, Risk assessment, Marine fish, Khuzestan.