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

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Abstract

In this study, Selenium 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 2019 to 2020. 15 fish were prepared from any of the different fish farms in Khuzestan province and after biometry of muscle tissue, the amount of Selenium was measured by atomic absorption method. The results showed highest concentration of selenium and hazard quotient were measured in *Platycephalus indicus* muscle (0.85± 0.11ppm Se and 1.4 HQ) ($P<0.05$). The lowest concentration of selenium and hazard quotient were in *Pampus argenteus* muscle(0.15±0.03ppm Se and 0.5 HQ) ($P>0.05$). Selenium concentration under the influence of weight did not cause significant differences in different species ($P<0.05$). The hazard quotient (HQ) was less than one in the studied species except for *Epinephelus coioides, Tenualosa ilisha* and *Platycephalus indicus* ($P>0.05$). Compared to selenium concentrations with world standards, the amount of selenium was lower than the standards of WHO, FDA, UK (MAFF), NHMRC. They do not have human health.

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