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Determination of Iron and Zinc contents of some selected common pelagic fish species in Sri Lanka

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Minerals are important nutrients and their nutritional and physiological functions are very essential in sustaining a healthy life. Their deficiencies lead to severe disorders. Among the essential minerals, iron (Fe) and zinc (Zn) are two most vitally important ones. Most of the fish species are rich sources of Fe, Zn and many other essential nutrients. A study was carried out to investigate the iron and zinc contents in six locally popular fish species namely *Sardinella melanura* (Salaya), *Carnax* spp. (Para), *Leiognathus* spp. (Karalla), *Anchovy commersonii* (Handella), *Amblygester* spp. (Hurulla) and *Hemiramphus* spp. (Moralla).

Fish samples were purchased from fish markets around Colombo. The metals were quantified by using X-ray Fluorescence Technique. The dried fish samples were ignited to obtain ash and analysed in triplicate. In the fish species, the amounts of Fe and Zn were calculated on a dry weight (DW) basis. The data were statistically analysed using ANOVA to identify whether there was a significant difference between the mean Iron and Zinc content of different fish types.

The Fe and Zn contents were significantly higher ($p<0.05$) in *S. melanura* than the other fish species studied. The Fe contents of *S. melanura* , *Amblygester* spp, *Hemiramphus* spp, *Carnax* spp., *Leiognathus* spp, and *A. commersonii*, were 103.8 ± 6.1, 65.4 ± 4.7, 41.0 ± 12.6, 34.2 ±1.3 , 26.9 ± 7.9 , and 21.0 ± 1.4 µg/g (DW), respectively.

The Zn contents of *S. melanura* , *Hemiramphus* spp, *Leiognathus* spp *Amblygester* spp, *A. commersonii*, *Carnax* spp., were 351.4 ± 3.5, 275.0 ± 0.8, 74.8 ± 0.6 , 51.8 ± 0.7, 43.6 ± 0.8, respectively.

The results showed that there was a significant difference ($p<0.05$) between the mean Fe and Zn contents of these fish species.

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