

## Quantifying Selected Nutritional Composition of *Siganus lineatus* Fish Bone from Waters Around Jaffna Peninsula, Sri Lanka

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Family Siganidae is considered to be an economically and nutritionally important species in Sri Lanka. The knowledge on their chemical composition of bone could help us to cure various diseases such as Osteoporosis as it could be applied as an ingredient of indigenous medicine. The studies related to the proximate and mineral composition of fishbone of *Siganus lineatus* are meagre in Sri Lanka. Hence, the present study was aimed to analyze the proximate and mineral of the fishbone powder of *S. lineatus*. 20-25cm total length of fish samples were collected from the Jaffna Lagoon from December 2019 to February 2020. The samples were cleaned, boiled and treated in order to achieve treated fish bone for production of powder form. The proximate compositions such as ash, protein, moisture and lipid content of the *S. lineatus* bone were determined by the standard AOAC methods. The mineral compositions such as Calcium (Ca), Sodium (Na) and Potassium (K) were determined by digital flame photometer and Phosphorus (P) by multiparameter photometer by the standard AOAC methods. The ash, protein, moisture and lipid content values were 50.74±0.65%, 22.07±0.29%, 6.29±0.35% and 3.50±0.16% in fishbone of *Siganus lineatus* respectively. The mineral composition of Ca, P, K and Na were 12.5%, 7.66%, 0.42% and 0.36%, respectively and the ratio of calcium: phosphorus is found to as 2:1. The present study showed relatively higher ash content. Therefore it is one of the method could be used to analyze the mineral content from fishbone. The results demonstrated that the fish bone powder was nutritious and can contribute towards the calcium deficient diseases and can be recommended for the clinical research studies as an important human health monitoring agent, in the future.

**Keywords:** Calcium deficient disease; Digital flame photometer; Fish bone; Multiparameter photometer; *Siganus lineatus*