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Effect of Temperature and Culture Medium on The Nutrient Content of *Skeletonoma costatum* Used at Shrimp Hatcheries in Bangladesh

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Live feed plays a crucial role in the development of larval aquatic organisms. Compared to artificial feeds, live feed is more readily consumed and processed by these young creatures. Additionally, live feed has a minimal impact on water quality, making it a preferred choice for aquaculture environments. Furthermore, live feed is packed with essential nutrients, including fatty acids and amino acids, which are vital for the healthy growth and development of larvae.

Skeletonema costatum has been widely used both in extensive and intensive hatchery systems *Penaeus monodon*. *S. costatum* to the penaeid shrimp in the zoea stage resulted in a survival rate of 30% to the mysis stage. This study is conducted to estimate and compare their nutrient composition and to find out the best suited feed according to the nutritional requirements of zoea stage of Shrimp.

Two culture media are considered as treatment (**T1- Raw compost+silica**, **T2- Enriched compost+ silica + B2+ B12**) for culturing of *S. costatum* in different temperature respectively 24°C, 27°C, 30°C for six month and proximate composition with fatty acid, micronutrients was analyzed.

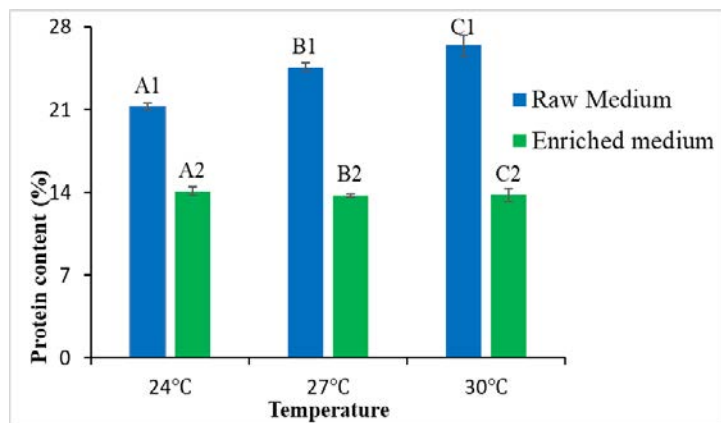


Figure: Protein percentage of *Skeletonema costatum* in Enriched medium in 24°C (A1), Raw medium in 24°C (A2), Enriched medium in 27°C (B1), Raw medium in 27°C (B2), Enriched medium in 30°C (C1) and Raw medium in 30°C (C2).

Moisture and Ash content of different samples showed no significant difference between treated samples. Moisture and Ash content was found respectively 85 ± 0.21 and 4.12 ± 0.27 in percentage. Ash, Protein, Lipid and Micronutrient content of different samples showed significant difference ($p < 0.05$) between treated samples. **T1 (Raw medium)** identified as best treatment and it will be recommended for Shrimp in Zoea stage.