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COMPARETIVE STUDY ON ESTIMATION OF PROTIEN FROM FRESH WATER BIVALVES LAMELLIDENS MARGINALIS AND LAMELLIDENS CORRIANUS FROM GODAVARI RIVER MAHARASHTRA

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ABSTRACT

In present study, variations in protein content in two different species of bivalves such as Lamellidens marginalis and Lamellidens corrianus. Both the species were collected from same environmental condition. *Lamellidens corrianus* have maximum protein from foot 112 ± 0.0479, Mantal 128 ± 0.0726 gill 144 ± 0.0854 and Hepatopancreas 167 ± 0.1092 as compared to *Lamellidens marginalis.* Whereas *Lamellidens marginalis* having protein from foot109± 0.0354, mantal 123±0.0525, Gill 139 ± 0.0485 and Hepatopancreas 154 ± 0.0852.

KEYWORDS: Protein, *Lamellidens corrianus* and *Lamellidens marginalis.*

INTRODUCTION

Bivalves are used as food next to fish and prawns from nutritive point of view. Bivalves are suspension- feeding organisms; it's providing a filtering service in river and lakes. The consumption of bivalve molluscs in India has increased in the recent year in response to the higher availability. *Lamellidens marginalis* and *Lamellidens corrianus* are cultivable fresh water species in India. Protein is most important compound of animal tissue. A change in biochemical contents is depends on environmental factors such as temperature, food availability and utilization of this reserve during gametogenesis cycle and maturation of the animals (Fernandeez – Reiriz et al. 1996; Okumus and Stirling, 1998). Temperature and food were considered to be the most important parameters. The effect of temperature could be direct by affecting the metabolic rate of bivalves or indirect by affecting the availability of food. Present study has carried out to understand the fluctuations in protein content from different tissue of *Lamellidens marginalis* and *Lamellidens corrianus.*

MATERIAL AND METHODS

The fresh water bivalves *Lamellidens marginalis* and *Lamellidens corrianus* were collected monthly from river Godavari district Nanded, Maharashtra India. After collection mussels were kept in laboratory for acclimatization. For the study of protein estimation a monthaly mussel were desected and from different tissue such as foot, mantal, gills and Hepatopancreas protein was estimated from both species. One year data was recorded. Protein was estimated by using **Lowry method** (Lowry *et al.*, 1951). Estimation was done by taking measurement on O.D. at 540 mu. Amount of protein calculated by using formula –

$$\text{Amount of protein} = \frac{\text{amount of protein obtained from standard graph} \times 100}{\text{Weight of tissue in grams}}$$

= mg of protein per 100 mg of tissue.

Table 1: Shows changes in protein content from different tissues of Lamellidens marginalis and Lamellidens corrianus.

Tissue	L. Marginalis	L. Corrianus
foot	109± 0.0354	112 ± 0.0479
Mantal	123±0.0525	128 ± 0.0726
Gill	139 ± 0.0485	144 ± 0.0854
Hepatopancreas	154 ± 0.0852	167 ± 0.1092

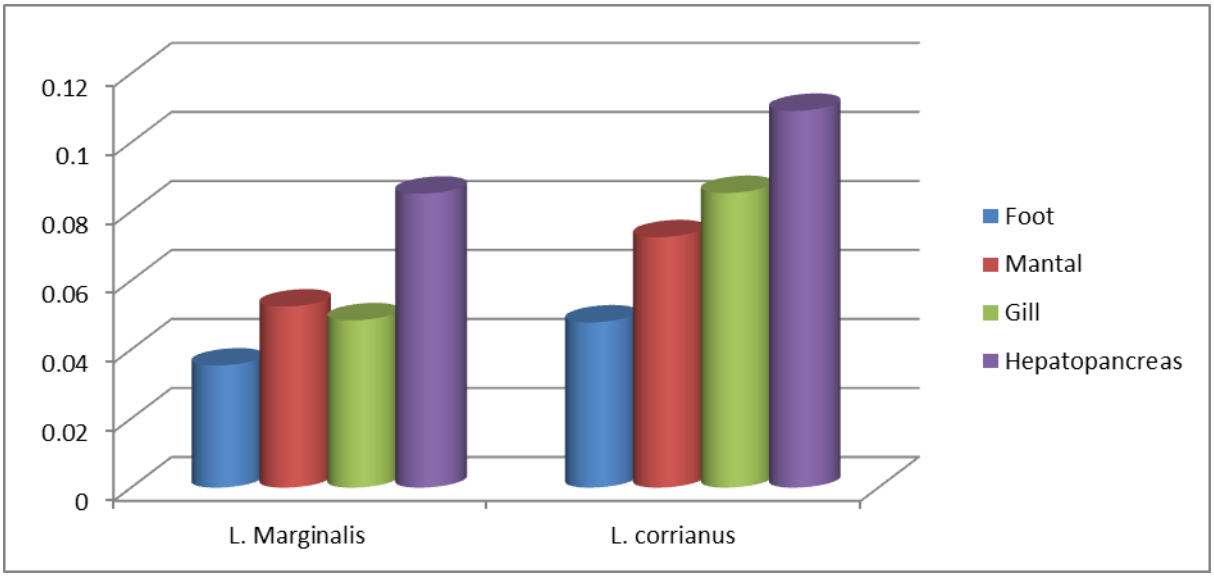

Chart 1: Shows comparative protein content from different tissues of Lamellidens marginalis and Lamellidens corrianus.

RESULT AND DISCUSSIONS

In comparative study on protein estimation from *Lamellidens marginalis* and *Lamellidens corrianus* result showed that *Lamellidens corrianus* have maximum protein from foot 112 ± 0.0479, Mantal 128 ± 0.0726 gill 144 ± 0.0854 and Hepatopancreas 167 ± 0.1092 as compared to *Lamellidens marginalis.* Whereas *Lamellidens marginalis* having protein from foot109± 0.0354, mantal 123±0.0525, Gill 139 ± 0.0485 and Hepatopancreas 154 ± 0.0852. Comparative study showed that maximum amount of protein found from *Lamellidens corrianus* and minimum amount of protein from *Lamellidens corrianus.* Chart gives the clear idea about the differences in protein content from different tissue of *Lamellidens marginalis* and *Lamellidens corrianus*. Both the mussels were from same environmental condition shows difference in protein content from different body parts.

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