

EFFECT OF TEMPERATURE ON BIOMOLECULES IN PENAEUS INDICUS

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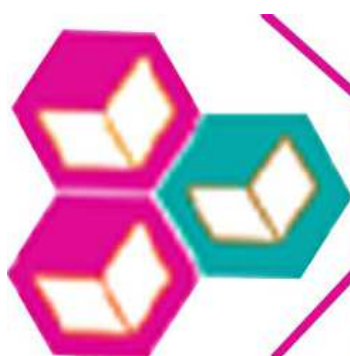
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ABSTRACT

Temperature affects nearly all biological processes including the structure of proteins and biological membranes and rates of biochemical and physiological reactions in all aquatic organisms. In the present study, the effect of temperature on biochemical constituents in *Penaeus indicus* showed much variation. The protein content showed fluctuations in muscle and hepatopancreas and in gill tissue it decreased at 20 °C for shorter time of exposure. An increase in protein content was noted in all the tested tissues at 37°C for short duration. Fluctuations in carbohydrate content were noted in the muscle, gill and hepatopancreas at 20 °C during short duration of exposure. Lipid content was fluctuated in all the tissues at 20 °C for shorter duration and it decreased in all the analyzed tissues for longer time of exposure. Elevated lipid content was observed in all the tested tissues at 37°C for shorter exposure time. But fluctuations were noted in all tissues at longer duration of exposure. The presence of these alterations may serve as “biomarkers,” signaling exposure to stressors or adverse effects, which can be set right.

KEYWORDS: Carbohydrate, Lipid, Protein, White Prawn



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