

## DIGESTIVE PROTEASES AND RELATIONSHIP WITH LIFE STAGES OF THE BRAZILIAN SHRIMP (*Farfantepenaeus subtilis*).

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The study of the digestive proteases from *Farfantepenaeus subtilis* is a relevant information for the understanding of the digestive physiology from this shrimp. The aim of this research was to characterize the digestive proteases on the different life stages of the shrimp *Farfantepenaeus subtilis*. Specific activity on crude extracts of juvenile and adult shrimps using BApNA was higher than using Leu-p-Nan. PMSF, TLCK and benzamidine inhibition differed between juvenile and adult shrimps ( $P < 0.05$ ), whilst inhibition displayed by bestatin was not. The maximum proteolytic activity using BapNA was at pH 8.5, on juveniles and adults, and 8.0 using Leu-p-Nan. The maximum proteolytic activity using BapNA and Leu-p-Nan on juvenile shrimps was at 55°C. For adult shrimps, the maximum activity was at 55°C and 45°C using BapNA and Leu-p-Nan, respectively. The leucine aminopeptidase-like presented retention of 60% of activity for juveniles and 80% for adults at 55°C. The thermal stability zymogram showed an extra slight band at 65°C for juveniles. The results suggest that trypsin and leucine aminopeptidase are present in *F. subtilis* hepatopancreas.

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