

Characterization of Digestive Proteases from Hepatopancreas of the Amazon River Prawn, *Macrobrachium amazonicum*, Males

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Macrobrachium amazonicum shows a great potential for aquaculture. Similar to *M. rosenbergii*, the sexually mature male populations of *M. amazonicum* consist of distinct morphotypes which differ in size, morphology, physiology and behavior. The aim of this work was to characterize digestive proteases from adult males of the amazon river prawn *M. amazonicum* in different morphotypes. The specimens were collected in earthen ponds of the Setor de Carcinicultura do Centro de Aquicultura da UNESP/Jaboticabal and separated into distinct morphotypes: Translucent Claw (TC), Cinnamon Claw (CC), Green Claw 1 (GC1) and Green Claw 2 (GC2). The hepatopancreas were homogenized with 0.9% (w/v) NaCl (40 mg/mL) using a tissue homogenizer and centrifuged at 10,000xg at 4°C for 25 minutes. Aminopeptidase activity was also evaluated using aminoacyl b-naphthylamide (AA-NA) with the following substrates: Arg, Leu, Gly and Ala. The results showed differences between the morphotypes. TC presented the great values for Arg and Leu. SDS-PAGE revealed 13 bands for CC and 15 bands for all other morphotypes. Zymogram of *M. amazonicum* hepatopancreas extracts showed 6, 8, 5 and 7 bands, in substrate-SDS-PAGE at 37°C, for TC, CC, GC1 and GC2 respectively. The results suggest the presence of aminopeptidases and differences in proteolytic activity of *M. amazonicum* hepatopancreas in different morphotypes.

Keywords: Aminopeptidase, Hepatopancreas, *Macrobrachium amazonicum* and Substrate SDS-PAGE.

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