

RNA, DNA and protein concentrations and amino acid profiles of deep-sea decapod

Seasonal changes in nucleic acid concentrations and amino acid profiles in the muscle of juvenile *Aristeus antennatus* were investigated. RNA content, RNA:DNA and RNA:protein ratios varied significantly between seasons ($p < 0.05$), being the lowest and the highest values obtained in winter and spring/summer. A significant variation in the total amino acid content (TAA) from winter to summer was observed ($p < 0.05$). In fact, during this period a significant percent of increase in total non- (NEAA; 20.2%) and essential amino acids (EAA, 18.7%) contents occurred. Concomitantly, a significant decrease in the free amino acid (FAA) content from winter to summer was observed. A higher percentage of decrease with free essential amino acids (FEAA; 56.6%) in comparison to free non-essential amino acids (FNEAA; 34.2%) was attained. The significant increase in RNA and TAA contents from winter to summer may be related with protein synthesis. On the other hand, the lowest values obtained in winter may be due to a reduction in feeding activity; in this period the muscle protein must be progressively hydrolysed, which is evident with the higher FAA content. The liberated amino acids enter FAA pool and become available for energy production.

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