

Thermal denaturation and aggregation of threadfin bream actomyosin

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Abstract

Threadfin bream (*Nemipterus bleekeri*) actomyosin formed insoluble aggregates at >40 °C. Conformational changes, as measured by surface hydrophobicity, began at >30 °C and continued to increase with heating temperature. Reactive sulfhydryl groups increased as heating progressed and decreased at 50 °C, indicating the formation of disulfide linkages of threadfin bream actomyosin at >50 °C. Two distinct α -helical transition temperatures of actomyosin were found at 36.1 and 47.9 °C, while major endothermic transitions were at 38.4, 51.0, and 80.7 °C. Storage modulus (G') started to increase at 34.5 °C, implying the simultaneous occurrence of denaturation and aggregation. Gel network formation began to develop at >41 °C.

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