Influence of high hydrostatic pressure on Mexican jackfruit seed proteins

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Abstract

High hydrostatic pressure (HHP) modified the native structure of jackfruit seed proteins, with the greatest effect observed at 600 MPa for 30 min after pressure release. DLS revealed protein aggregation, while thermal analysis indicated changes in the energy required for denaturation, suggesting partial unfolding and the formation of aggregates stabilized by weak noncovalent interactions. These structural changes may improve techno-functional properties, although further optimization of HHP conditions and Native-PAGE analysis are required to characterize the aggregates and support their application as alternative food protein ingredients.