

Improvement of Protein Extraction From Shrimp by Product Used for Electrospinning by Applying Emerging Technologies

Authors : Mario Pérez-Won, Vilbett Briones L., Guido Trautmann, María José Bugueño, Gipsy Tabilo-Munizaga, Luis Gonzalez-Cavieres

Abstract : The fishing industry generates a significant amount of shrimp byproducts, which often result in environmental contamination. Protein extraction from these by-products is a potential solution to minimize waste and revalue the by-products. To improve the extraction of proteins (by chemical method) from shrimp (*Pleuroncodes monodon*) by-products, the emerging technologies of ohmic heating (OH), microwaves (MW) and pulsed electric fields (PEF) were used. The results show that microwaves, electrical pulses, and ohmic heating improved performance by 28.19%, 19.25%, and 3.65%, respectively. Furthermore, conformational changes were studied by DSC and FTIR. Subsequently, the use of these proteins in electrospinning technology was evaluated. In conclusion, this study demonstrates that the application of emerging technologies, can significantly improve the extraction yield of proteins from shrimp by-products.

Keywords : electrospinning, emerging technologies, improving extraction, shrimp by-products

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