

Effect of Electromagnetic Fields on Protein Extraction from Shrimp By-Products for Electrospinning Process

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Abstract : Shrimp by-products are a valuable source of protein. However, traditional protein extraction methods have limitations in terms of their efficiency. Protein extraction from shrimp (*Pleuroncodes monodon*) industrial by-products assisted with ohmic heating (OH), microwave (MW) and pulsed electric field (PEF). It was performed by chemical method (using NaOH and HCl 2M) assisted with OH, MW and PEF in a continuous flow system (5 ml/s). Protein determination, differential scanning calorimetry (DSC) and Fourier-transform infrared (FTIR). Results indicate a 19.25% (PEF) 3.65% (OH) and 28.19% (MW) improvement in protein extraction efficiency. The most efficient method was selected for the electrospinning process and obtaining fiber.

Keywords : electrospinning process, emerging technology, protein extraction, shrimp by-products

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