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Extraction and characterization of collagen from the white jellyfish (*Lobonema smithi Mayer.*)

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Collagen has been used in a wide range of applications in health pharmaceutical and cosmetic industries. White jellyfish (*Lobonema smithi Mayer*) are edible after brining with salt, blooming every year in the bay of Thailand, has become a new natural source of collagen for using in health products industries. This project aims to study the extraction process of collagen from the white jellyfish in order to get rid of its fishy odour. The processes were used pepsin to extract collagen from fresh (CF) and brining with salt (CB) of White jellyfish. The result showed that the CB gave 39.2% yield of collagen which was higher than CF, 22.2%. The characteristic of collagen base on HPLC and ¹H-NMR techniques exhibited that all collagen contained high content of glycine, glutamic acid, alanine and proline. FT-IR spectra pattern of CB presented the strong signal of peak at 1,543.66 cm⁻¹ (Amide II) whereas CF gave that of weak peak. To confirm of collagen type by using sodiumdodecyl sulfate-polyacrylamide gel electrophoretic patterns and FT-IR spectra, indicated that both of collagen CB and CF are in the collagen type I. Moreover, CB possessed lower level of fishy smell than CF. From the results could suggest that the white jelly fish should be brined with salts for extraction and pepsin was the suitable process for collagen extraction in this experiment. Further works will focus on toxicity of collagen extracted from fresh and brined white jelly fish.

Biography

Ubon Rerk-am has completed her Master's degree in Analytical Chemistry from King Mongkut's Institute of Technology Ladkrabang, Thailand. She has excellent experienced in analysis of essential oils using GC-MS for more than 15 years. She has worked in peptides and the products development in cosmetics for more than 5 years. She has published more than 10 proceeding papers in the international conferences.

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