

OPTIMIZATION OF GELATIN PRODUCTION PROCESS FROM THE SKIN OF TRA CATFISH (*Pangasius hypophthalmus*)

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ABSTRACT

The objective of this study was to investigate the optimal conditions for producing gelation from the skins of Tra catfish. The obtained results indicated that the chemical compositions of the skins were of 28.9% total nitrogen (N_{TS}), 0.12% ammonia nitrogen (NH_3), 10.56% lipid, 0.12% ash and 60% water. The optimal conditions for producing gelatin from the skins of Tra catfish were: The skins were firstly immersed in 0.95M NaCl solution for 9 min at a ratio of NaCl solution to skins of 6:1. Subsequently, the skins were immersed in 0.16M NaOH solution for 30 min at a ratio of 6 NaOH solutions to 1 fish skins. After that, the skins were immersed in 0.051M citric acid solution for 11 h at the ratio of citric acid solution to fish skins was 1:1. The gelatin was then extracted by boiling the skins at the temperature of 80 °C for 5.5 h at a ratio of 1 solution to 1 fish skins. The gelatin extract was finally concentrated and dried at 50-55 °C for 6-8 h with the air velocity of 1.5 m/s to obtain gelatin production.

Keywords: *Tra catfish, fish skin, gelatin, extraction*

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