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CHARACTERIZATION OF ACID SOLUBLE COLLAGEN FROM THE SKIN OF SNAKESKIN GOURAMI (*TRICHOGASTER PECTORALIS*)

Piyaporn Sukkon[1], Ali Muhammed Moula Ali[1], Sitthipong Nalinanon[1]✉, Hideki Kishimura[2], Sirima Takeungwongtrakul[3]

[1]Faculty of Food Industry, King Mongkut's Institute of Technology Ladkrabang, Ladkrabang, Bangkok, 10520, Thailand
[2]Laboratory of Marine Chemical Resource Development, Faculty of Fisheries Sciences, Hokkaido University, Hakodate, Hokkaido, 041-8611, Japan
[3]Department of Agricultural Education, Faculty of Industrial Education and Technology, King Mongkut's Institute of Technology Ladkrabang, Ladkrabang, Bangkok, 10520, Thailand
✉*sitthipong.na@kmitl.ac.th*

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ABSTRACT

The present study was aimed to isolate and characterized acid soluble collagen (ASC) from the skin of snakeskin gourami (*Trichogaster pectoralis*). ASC from gourami skin had a yield of 9.43% and 34.65%, based on wet and dry weight basis, respectively. The purity of ASC was superior with a distinct absorption peak at wavelength (WL) of 230.7 nm. Based on the electrophoretic pattern, gourami skin ASC was classified as type I collagen, as it comprised α1 and α2 as major components and higher molecular weight (MW) components γ, β were distinctly observed. ASC exhibited high T_{max} value of 33.43°C, which could correspond to its imino acids content of 188 residues/1000 residues. Fourier transform infrared (FTIR) spectrum and circular dichroism (CD) revealed that ASC extracted from gourami skin had greater structural integrity in its triple-helical form. Solubility of ASC was high at the pH range of 2-4 in which zeta potential exhibited highly positive charge. The highest solubility of ASC in the presence of NaCl was observed at 2% (w/v). Therefore, with all the characteristic features, ASC from snakeskin gourami skin can be a value-added product in the fish processing industry.