

Comparison of physicochemical properties of barracuda (*Sphyraena Barracuda edwards, 1771*) skin collagen hydrolyzed using two Different pepsin sources

ABSTRACT

This research focused on the comparison of extractability and physicochemical properties of barracuda (*Sphyraena barracuda* Edwards, 1771) skin collagens prepared using pepsins from bovine (PSC-B) and porcine (PSC-P). The PSC-P sample had a significantly higher ($p < 0.05$) collagen extractability (31.16%) compared to the BCPB (19.48%). Based on the Sodium dodecyl-sulfate polyacrylamide gel electrophoresis (SDS-PAGE) profiles, all hydrolyzed collagens were identified as a type I collagen with two different alpha chains ($\alpha 1$ and $\alpha 2$). The Infrared spectra showed that the collagen's triple-helical structure was maintained in the PSC-B and PSC-P samples, as mostly reported from other literatures. In terms of the thermal stability, the T_m value of BCP-B (43.63°C) was greater than that of BCP-P ($T_m = 37.49^\circ\text{C}$), and their values were comparable to other literatures related on marine fish skin collagens. Overall, the by-product skin of barracuda (*S. barracuda* Edwards, 1771) can be utilized for alternative collagen products.