Characterization of gelatin from the skin of farmed Amur sturgeon *Acipenser schrenckii*

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Abstract

Gelatin was extracted from the skin of farmed Amur sturgeon (*Acipenser schrenckii*) with a yield of 19.6% and its properties were evaluated. Its glycine and imino acids (proline and hydroxyproline) content were 336 and 138 residues/1000 residues respectively. Based on electrophoretic study, gelatin consisted of two major protein bands corresponding to α-chain and cross-linked component (β-chain). The gel strength of gelatin was 316 g, while its gelling and melting temperatures were 13 and 19.6 °C respectively as determined by temperature sweep test. Flow behavior of gelatin solutions as a function of concentration (1, 3 and 5%) and temperature (10, 30, 45 and 60 °C) indicated a clear non-Newtonian, pseudoplastic behavior at 10°C and 5% gelatin solution. Fourier transform infrared (FTIR) spectroscopic study showed major absorption bands of amide A, I, II and III at 3414.73, 1640.60, 1534.57 and 1235.01 cm
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respectively.

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