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Effects of pretreatment on properties of gelatin from perch (*Lates Niloticus*) skin (Article)

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Abstract

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Fish gelatins obtained from perch fish skin pretreated with various solutions containing acetic acid, sodium hydroxide (NaOH) and sodium chloride (NaCl) were successfully characterized for their nanostructure pattern using field emission scanning electron microscopy. Each pretreatment transformed collagen to gelatin with fibril, zigzag cracks, straight rods, and cross-linked rods nanostructure patterns. Pretreatment solutions also affect the gel yield, gel strength, amino acid profile, and functional groups in perch gelatin as analyzed by Fourier transform infrared spectroscopy. Samples pretreated with NaCl, NaOH, and acetic acid solution showed the highest gel yield (22.84%) and gel strength (179.84 g). Fourier transform infrared spectra for perch gelatins also revealed weak C-N amide II and III bond stretches as well as weak C=O bond stretch. © 2014 Copyright Taylor & Francis Group, LLC.

Author keywords

Extraction FESEM Gel strength Gelatin Nanostructure

Indexed keywords

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FESEM

Field emission scanning electron microscopy

Fourier transform infrared spectra

Gel strengths Gelatin

Pre-treatment solutions

Sodium chloride (NaCl)

Sodium hydroxides

Engineering main heading: Sodium chloride

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