

Chemical and enzymatic modification of New Zealand hoki (*Macruronus novaezelandiae*) skin gelatin and its properties

by Professor Conrad O. Perera

Abstract

Chemical modification of gelatin from hoki skins were carried out using three different cross-linking agents namely, genipin, glutaraldehyde, and caffeic acid. The chemically modified gelatins exhibited better physical properties, such as higher gel strength, melting point, and rheological properties than the uncross-linked ones. Gelatin cross-linked with added glutaraldehyde gave the highest gel strength and melting point (231 g, 21.9 °C) compared to those cross-linked with caffeic acid (229 g, 21.6 °C) and genipin (211 g, 20.5 °C) at a concentration of 0.133 M, 0.111 M, and 0.044 M, respectively. However, Transglutaminase (TG) cross-linked gelatin exhibited the best gel strength and melting point which were close to those of bovine gelatin. These improved properties of gelatin could lead to the development of products in the food industry that will meet the consumer demands.

About the speaker

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Professor Conrad Perera is a Professor at School of Chemical Sciences, University of Auckland, New Zealand. He was Associate Professor at NUS from year 2000 to 2005, joined the pioneer team to set-up FST Programme. His research interests are in the Chemistry and Technology of processing of food, with special emphasis on functional foods. He has been consulted extensively to FAO, UNIDO, World Bank, Secretariat of the Pacific Community and other national and international organizations on food processing projects. He has mentoring many postgraduates and industry projects, and with extensive publications.

Host : Mr Daniel Chia Han Yong

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Time : 7.00 pm

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All are welcome!

