A Review of Gelatin Source Authentication Methods

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Abstract

Gelatin is a very popular pharmaceutical and food ingredient and the most studied ingredient in Halal researches. Interest in source gelatin authentication is based on religious and cultural beliefs, food fraud prevention and health issues. Seven gelatin authentication methods that have been developed include: nucleic acid based, immunochemical, electrophoretic analysis, spectroscopic, mass-spectrometric, chromatographic-chemometric and chemisorption methods. These methods are time consuming, and require capital intensive equipment with huge running cost. Reliability of gelatin authentication methods is challenged mostly by transformation of gelatin during processing and close similarities among gelatin structures. This review concisely presents findings and challenges in this research area and suggests needs for more researches on development of rapid authentication method and process-transformed gelatins.

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