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Development of Chitosan and Polycaprolactone based active bilayer films enhanced with nanocellulose and grape seed extract

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Highlights

Active chitosan (CH) films were prepared with nanocellulose and grape seed extract

CH-based bilayer film was prepared by coating and compression with polycaprolactone

Allowing combination of active properties with adequate physicochemical properties

The suitability of chitosan films was improved for food packaging applications

Abstract

In this study, nanocellulose (NC) (2-5%, w/w) and grape seed extract (GSE) (15%, w/w) added chitosan (CH) and polycaprolactone (PCL) based active bilayer films were prepared by

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