N°748 / FC
TOPIC(s) : Environnemental impact and life cycle assessment / Renewable carbon / Biomass conversion / Valorization of waste

Synthesis and characterization of newplastic films containing chitosan and clay

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PURPOSE OF THE ABSTRACT

Synthesis and characterization of newplastic films containing chitosan and clay
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The present research is directed towards the development of biodegradable ecofriendly materials with enhanced properties. The increase in living standards, changing habits consumer, industrial development led to a high consumption of materials plastics.
Chitosan is a natural mucopolysaccharide of marine origin consists of a linear (1-4)) linked 2- amino-2-deoxy-D glucan, obtained from chitin, is a relatively inexpensive material because chitin is the second most abundant polymer in nature, next to cellulose. In the same way, clays are abundant and low-cost natural materials. Her positive charge and its molecular arrangement confer him interesting properties
Films based on chitosan and polysaccharide offer many advantages in the food industry because they are edible and perform as a barrier against pathogenic micro-organisms for extending shelf life of various food products.
The structural properties, thermal behaviour and mechanical properties of nanocomposites of chitosan with various clays have been characterized using scanning electron microscopy (SEM), thermogravimetric analysis (TGA) and a tensile test.
The nanocomposite film prepared combines two inexpensive resources available and biocompatible.
Keywords:
Chitosan films, Biomaterials, Nanocomposite, Composite, Polysaccharide, Antibacterial activity.

FIGURES

FIGURE 1

FIGURE 2

KEYWORDS

Biomaterials | Nanocomposite, | Polysaccharide | Chitosan films

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