
Abstract No. 5

PaperTitle **Food Biopolymers as Green Plastics**

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ABSTRACT

Food biopolymers are lipids, proteins, and polysaccharides. These biopolymers are edible and biodegradable. They can be transformed into edible films and coatings in food packaging systems. Thus they can be environmentally friendly alternatives to synthetic plastics as can be referred as 'green plastics' or 'bioplastics'. However the performance (strength and permeability properties) of the green plastics is inferior when compared to synthetic ones. Several methods can be used to modify green plastics to improve their performance. This paper will explore some food biopolymers to be used as green plastics and will explain ways to modify biopolymers to change the physical properties. Methods of modification to be discussed will be plasticization, chemical modification with natural compounds for example tannins, and heat as a physical modification. Plasticization can increase the extensibility of green plastics. Chemical modification with tannins can increase the strength and change the permeation properties. Heat as physical treatments increase the strength of green plastics