RECENT ADVANCES OF DIFFERENT TYPES OF BIOPOLYMER AS COATING MATERIALS IN FOOD PACKAGING : A REVIEW

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ABSTRACT

RECENT ADVANCES OF DIFFERENT TYPES OF BIOPOLYMER AS COATING MATERIALS IN FOOD PACKAGING

Food packaging essentially important and recently adapting to key market trends including the explosive expansion of e-commerce during COVID-19 pandemic. Food packaging act to protect food and provide barrier in terms of safety, shelf-life and storage. However, environmental pollution regarding plastic waste have become major issue in food packaging industry. Thus, biopolymer has been introduced to overcome this problem. Biopolymer have been gaining attention as coating materials in food packaging. This is due to their advantages which are biodegradable and low cost. This review highlights with the ongoing shift of the roles of food packaging and the advantages of biopolymer in food packaging. There is also a quick explanation of how biopolymers' coating technology advancement has been made. In general, this study analyses biopolymer properties and roles as coating materials in food packaging. This review combines the knowledge applicable to the use of biopolymer in food packaging by careful examination of the current literature on the topic.

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CHAPTER 1

INTRODUCTION

1.1 Background of study

The COVID-19 pandemic enlighten people the crucial function of packaging for food safety and conservation, heightened interest in the possible hygienic–sanitary advantages in food packaging industry (Barone *et al.*, 2021). The pandemic scenario is expected to grow the market of food packaging as food delivery service has increase gradually due to the closure of restaurants and cafeterias during COVID-19 crisis. Food packaging acts as a passive barrier by shielding food from UV radiation, oxygen, water vapour, pressure, and heat (Sharma *et al.*, 2021). The materials for food packaging are produced in term of safety, functionality, informative and ergonomic. Packaging plays a vital function in the food sector since it offers numerous advantages such as increase shelf life, easier handling, and protect from physicochemical damage during storage or transportation (Pilevar *et al.*, 2019).

The 2030 agenda, which was adopted by UN Member States in 2015 that includes 17 Sustainable Development Goals (SDGs) which aiming for