

# Edible coating and films as promising packaging: a mini review

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## Abstract

Increasing global wastes containing various beneficial molecules such as carbohydrates, proteinous compounds, and essential oils lead scientists to design and synthesize novel materials. In this respect, agricultural wastes are among the beneficial materials that can be used as natural sources to synthesize bio-based packaging. Consequently, the use of wastes as a source of packaging material not only can reduce the costs of the food industry dramatically but also can improve the quality of packed foodstuff. Moreover, since some chemical and biological materials such as essential oils and nanoparticles cannot be implemented in food formula directly, therefore, application of such substances as a part of food packaging can be a proper solution. Therefore, this paper summarized the literature about the application of various edible coatings and films in this arena. Incorporation of various nanoparticles and essential oils in edible coatings was also discussed. Also, antimicrobial edible coating, polysaccharide, and protein-based edible coatings were discussed. In conclusion, various agricultural and food-based wastes should be considered and evaluated for their potential application in the packaging industry.