



## Active packaging systems for a modern society

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**Abstract :** Nowadays, there has been a change in the paradigm of food packaging. Active packaging of food is a good example of an innovation that goes beyond the traditional functions of the package in which the package, the product and its environment interact to extend the shelf life of food or to improve its safety or sensory properties, while maintaining the quality of the packed food. Market growth is expected for active packaging with leading shares for moisture absorbers, oxygen scavengers, microwave susceptors and antimicrobial packaging. The material chosen for the packaging has a high influence on the antimicrobial compound migration, a topic that has been specifically addressed in this article, providing an overview of the most relevant scientific works published in the last decade concerning the use of different packaging materials. Nevertheless, apart from the beneficial antimicrobial action, active packaging can be responsible for the transfer of nondesirable substances, which must be controlled in order to guarantee the compliance of the established regulations and the consumers' safety. The ultimate goal of an active packaging system should be the reduction of food loss and waste, extending product shelf life and reducing waste by clarifying the suitability of a product for consumption. This article reviews: (1) the different categories of active packaging concepts and currently available commercial applications, (2) latest packaging research trends and innovations, and (3) the growth perspectives of the active packaging market.

**Key words:** Active packaging, Shelf life, Antimicrobial, Antioxidant.

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