

Title Edible films and coatings: Structures, active functions and trends in their use

Author Víctor Falguera, Juan Pablo Quintero, Alberto Jiménez, José Aldemar Muñoz and Albert Ibarz

Citation Trends in Food Science & Technology, Volume 22, Issue 6, June 2011, Pages 292-303

Keywords edible film; fresh produce

Abstract

Edible films and coatings are thin layers of edible materials applied on food products that play an important role on their conservation, distribution and marketing. Some of their functions are to protect the product from mechanical damage, physical, chemical and microbiological activities. Their use in food applications and especially highly perishable products such as horticultural ones, is based on some particular properties such as cost, availability, functional attributes, mechanical properties (flexibility, tension), optical properties (brightness and opacity), the barrier effect against gases flow, structural resistance to water and microorganisms and sensory acceptability. In this piece of work, the latest advances on their composition (polymers to be used in the structural matrix), including nanoparticles addition, and properties have been reviewed, as well as the trends in the research about their different applications, including oil consumption reduction in deep-fat fried products, their use in combination with bioactive compounds that bring foodstuff additional functions and shelf life extension of highly perishable products.