UNCONVENTIONAL ANTIMICROBIAL TREATMENTS FOR FOOD SAFETY AND PRESERVATION

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Abstract

Despite intensified prevention efforts, foodborne illness remains a serious health problem worldwide. Food spoilage is caused by both biologically and chemically agents. The growth of microorganisms is the major route for food spoilage, leading to low quality, shortened shelf-life, and changes in natural micro-flora that could induce pathogenic problems. Microbial spoilage of food products is caused by many bacteria, yeast, and moulds. For the food industries, the prevention of food spoilage is a very important issue in determining profit. Furthermore, reducing food spoilage can prolong the shelf-life of food products and accordingly extend market boundary, resulting in increased profit.
The objective of this work is to make a short review in respect to unconventional antimicrobial treatments of food, which are used nowadays in industry or are in the research and development phase. The paper presents an inventory of novel techniques such as: ohmic treatment, PEF , microwave treatment, IR, UV, UHP, ozone treatment, light pulses treatment, plasma treatment, active packaging, encapsulation of antimicrobial compounds, edible films, radio frequency treatment.

Key words: *food spoilage, antimicrobials, food safety and preservation*

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