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Nota di contenuto	Front Cover; Preface; Contents; Part A: Modern Preservation Methods; Chapter 1: High Pressure Microbial Inactivation: Modelling and its Features; Chapter 2: Implementation of Microbially Safe Foods with Pulsed Electric Fields; Chapter 3: Applications and Modeling Aspects of UV and Pulsed UV-Light for Food Decontamination; Chapter 4: Ultrasound Processing for Food Safety and Preservation; Chapter 5: Ozone: A Novel Microbial Inactivation Process; Chapter 6: Nonthermal Plasma Technology for Decontamination of Foods Chapter 7: Novel Approach to Control Pathogenic and Harmful Microorganisms in Nonthermal Way: Photosensitization Chapter 8: Encapsulation and Delivery of Antimicrobial Compounds; Chapter 9: Application of Edible Films and Coatings on Food; Part B: Modern Techniques in Food Microbiology; Chapter 10: Old Targets, New Weapons: Food Microbial Communities Revealed With Molecular Tools; Chapter 11: The Use of qPCR-based Methods to Identify and Quantify Food Spoilage Microorganisms; Chapter 12: Advances in the Detection of Food-borne Pathogens Using Molecular Methods Chapter 13: MALDI-TOF Mass Spectrometry, a Rapid and Reliable

Method for the Identification of Bacterial Species in Food-Microbiology Laboratories
Chapter 14: Monitoring Microbial Spoilage of Foods by Vibrational Spectroscopy (FT-IR & Raman); Chapter 15: The Potential of Hyperspectral Imaging for Monitoring Microbial Activity in Foods; Color Plate Section

Sommario/riassunto

Preface: The introduction of microbial ecology and 'hurdle theory' concepts in food microbiology during late 1980's contributed greatly to its evolution, while the improvement of microbiological methods offered useful tools for monitoring microbiological quality and safety of foods. Subsequently, the demand for minimal processing promoted the development of innovative non-thermal techniques and application of mild preservation strategies for microbial control in foods. Additionally, the application of molecular genetic methods, offered a powerful tool for better exploration and understanding of food microbial diversity. The aim of this book is a thorough presentation of the recent and novel advances in food microbiology. The book is divided in two parts. The first part discusses the microbiology of novel food preservation methods. Some of those methods have already numerous applications, such as high pressure processing, while others appear to be very promising for future applications. The second part is dedicated on the newly developed applications of molecular genetics and instrumental analysis for detection and monitoring of microorganisms and their activity in food systems. Non-thermal processing has a lot of advantages compared to traditional heat processing. Chapter 1 discusses the high pressure processing (HPP), a non-thermal preservation technique for producing high quality food with minimal changes in colour, flavour and texture, when compared with conventional thermal processing. Additionally, the predictive modeling of HPP induced microbial inactivation and the phenomena of injured-recovery of microbial cells after HPP-treatment are also included--
