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nano biosensors for food testing -- Packaging solutions for monitoring food quality and safety.

Sommario/riassunto

Engineering Aspects of Food Quality and Safety aims to fill the knowledge gap in current technological advances and methods for food safety and quality, dedicating entire sections to analytical techniques from quality testing to packaging, post-harvest methods from product utilization to storage to chemical engineering principles and pre-harvest interventions from genetic engineering and mechanization to the links between pre-and-post harvest techniques. Throughout the book, global policy perspectives are taken into account. An introductory section is also included to cover the role of food processing and engineering in food quality and safety improvement. Encompassing all of the major applications and challenges involved in the engineering aspects of food safety and quality in one source, this work is incredibly valuable to a wide range of food engineers, scientists, and industry professionals involved in the engineering, processing and packaging of both novel andtraditional foods. This text provides a detailed overview of the newest methods and advanced technologies used in the improvement of quality and safety in foods. The processes and methods described in this book are applicable to many areas of the food industry including pre-harvest and post-harvest technology, food machinery and product formulation. Featuring contributions from prominent food scientists and engineers across the globe, this work contains detailed coverage of the latest advances in genetic and chemical engineering, mechanization, thermal and non-thermal processing, automation, computational tools, packaging and waste management. The latest analytical techniques are also covered, including chapters dedicated to in-line monitoring, nanosensors, rapid testing kits and E-sensors. Maintaining a high standard of safety for consumers in foods is an interdisciplinary effort involving biologists, chemists, nutritionists, chemical engineers, mechanical engineers and genetic engineers among others. All of these experts will find this book to be a singular source encompassing all of the major current advances in food safety engineering and processing. .