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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1 Introduction: a brief guide to targets and strategies of functional nucleic acids detection in food safety -- 2 Adaptable methods to extract nucleic acid targets and evaluate quality -- 3 Basic rules in nucleic acids-mediated amplification and hybridization methods in food safety detection: a review -- 4 Reference materials: a golden criterion in nucleic acids identification -- 5 Reference gene: in-species universality versus between-species uniquity -- 6 PCR-based technologies for identifying unknown gene sequences -- 7 A developed accurate digital PCR detection technology in food safety -- 8 Development of accurate nucleic acids detection technology for target quantification -- 9 Recent progress in high-throughput detection technology for food safety -- 10 Detecting targets without thermal cycling in food: isothermal amplification and hybridization -- 11 Aptamers and their application -- 12 Lateral Flow Nucleic Acid Biosensors -- 13 Nucleic Acid Biosensors for food safety -- 14 Alternative PCR methods for detecting GM crops & food in agriculture

and the food chain: a review -- 15 The identification and detection technology of research in microorganism include living or dead bacteria -- 16 Characterization of microbial diversity in food chain: a molecular review -- 17 Identification and assessment of heavy metal pollution using nucleic acid-mediated technologies -- 18 Genotoxicity detection at the molecular level in food safety assessment: conventional methods and developments -- 19 A molecular review of the detection of specific nucleic acids by amplification and hybridization Characterization of microbial diversity in the food chain: a molecular review.

Sommario/riassunto

This book focuses on the development and applications of functional nucleic acid-based detection methods in the context of food safety. Offering a comprehensive overview of nucleic acids detection method in food safety for professionals and members of the public interested in this area, the book is divided into two parts. Part I addresses the basic principle of nucleic acid detection, while Part II presents novel applications of detection methods in genetically modified organisms, the identification of dead-alive microorganisms, microbial diversity, heavy metal detection, gene toxicity and non-coding RNA identification. As such, it provides readers a wealth of knowledge on the use of nucleic acids as targets and media in food safety. It offers a valuable resource for clinicians and basic scientists in the areas of food science and microbiology, and for all those who are interested in the concrete applications of molecular biological techniques. .