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Nota di contenuto	Part I. Principles of Proteomics -- 1. Understanding the proteome. - 2. Extraction/fractionation techniques for proteins and peptides and Protein digestion.- 3. Primary separation: 2-D electrophoresis.- 4. Primary Separation: Chromatography -- 5. Mass spectrometry applications -- Part II. Food Applications of Proteomics.- 6. Challenges and applications of protemics for analysis of changes in early postmortem meat.- 7. Application of proteomics for analysis of protein modifications in postmortem meat.- 8. Biological markers for meat tenderness of the three main French beef breeds using 2-DE and MS approach -- 9. Dry-cured ham -- 10. Evaluation of fish quality and safety by proteomics techniques.- 11. Farmed and Wild fish -- 12. Fish Authentication -- 13. Proteomics in Milk and Milk Processing.- 14. Cheese processing -- 15. Lactic acid bacteria in fermented foods -- 16. Wine quality.- 17. Eggs.- 18. Fruits and vegetables.- 19. Wheat grain proteomics for the food industry.- 20. Proteomics and applications to food science in rice.- 21. Beer proteomics -- 22. Nutritionally relevant proteins -- 23. Relevance of Peptides Bioactivity in Foods -- 24. The role of proteomics in the discovery of marker

proteins of food adulteration -- 25. Evaluation of genetically engineered crops using proteomics -- 26. Microbial proteomics for food safety -- 27. Prion biomarkers -- 28. Proteomics of filamentous fungi.

Sommario/riassunto

This book provides readers with the recent advances and state-of-the-art in food proteomics, which constitutes one of the most relevant and rapidly developing areas in food science. The first part covers the principles of proteomics, including an in-depth discussion of the proteome, as well as the extraction and fractionation techniques for proteins and peptides, separation techniques like 2-D electrophoresis and chromatography, and mass spectrometry applications. The second part covers applications to foods, such as quality issues related with post-mortem processes in animal foods, and quality traits for a wide variety of foods like meat, fish, dairy, eggs, wine, beer, cereals, fruits and vegetables. Also discussed are the identification of bioactive peptides and proteins, crucial from a nutritional perspective, and safety issues like food authenticity, detection of animal species in the food, markers of pathogen microorganisms, and identification of prions. Editors Fidel Toldrá is a Research Professor at the Instituto de Agroquímica y Tecnología de Alimentos (CSIC), Valencia, Spain Leo M. L. Nollet is a Professor at the University College Ghent (Hogeschool Gent), Belgium.