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freezing processes; 7 Outlook for high pressure processing of food; 8 Conclusions; References; 2. High-pressure Processing of Salads and Ready Meals; 1 Introduction; 2 Importance of salads and ready meals; 3 Pressure effects on microorganisms; 3.1 Efficacy of microbial inactivation in HPP processed ready meals; 3.2 Efficacy of microbial inactivation in HPP-processed dips, sauces and salad dressings; 4 Pressure effects on enzyme activity; 4.1 Effect of high pressure on enzyme activity of fruits and vegetables
4.2 Effect of high pressure on enzyme activity in meats5 Pressure effects on texture; 5.1 Textural changes in pressure treated ready meals; 5.2 Textural changes in pressure-treated dips, sauces and salad dressings; 6 Pressure effects on nutrients; 7 Conclusions; Acknowledgement; References; 3. Microbiological Aspects of High-pressure Processing; 1 Introduction; 2 Factors affecting effectiveness of treatment; 2.1 Types of organisms; 2.2 Food products; 2.3 Conditions of treatments; 2.4 Combined treatments; 3 Effects of high pressure; 3.1 Bacterial and fungal cells; 3.1.1 Morphology
3.1.2 Cell wall and membrane3.1.3 Biochemical reactions; 3.1.4 Genetic mechanisms; 3.2 Bacterial spores; 3.3 Parasites; 3.4 Viruses; 4 Conclusions; References; Part 2 Pulsed Electric Fields Processing; 4. Overview of Pulsed Electric Field Processing for Food; 1 Introduction; 2 Historical background; 3 Mechanisms of action; 4 PEF treatment systems; 4.1 Generation of pulsed electric fields; 4.2 Treatment chamber design; 5 Main processing parameters; 5.1 Electric field strength; 5.2 Treatment time, specific energy and pulse geometry; 5.3 Treatment temperature; 5.4 Treatment medium factors
5.4.1 Conductivity

Sommario/riassunto

Emerging Technologies for Food Processing presents a comprehensive review of innovations in food processing, stresses topics vital to the food industry today, and pinpoints the trends in future research and development. This volume contains 27 chapters and is divided into six parts covering topics such as the latest advances in non-thermal processing, alternative technologies and strategies for thermal processing, the latest developments in food refrigeration, and current topics in minimal processing of vegetables, fruits, juices and cook-chill ready meals and modified atmosphere packag