

1. Record Nr.	UNINA9910459640403321
Titolo	Electron beam pasteurization and complementary food processing technologies // edited by Suresh Pillai, Shima Shayanfar ; contributors T. Bolumar [and twenty five others]
Pubbl/distr/stampa	Cambridge, England : , : Woodhead Publishing, , 2015 ©2015
ISBN	1-78242-108-4 1-78242-100-9
Descrizione fisica	1 online resource (355 p.)
Collana	Woodhead Publishing Series in Food Science, Technology and Nutrition ; ; Number 271
Disciplina	664.02
Soggetti	Food industry and trade Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Cover; Electron Beam Pasteurization and Complementary Food Processing Technologies; Copyright; Contents; List of contributors; Woodhead Publishing Series in Food Science, Technology and Nutrition; Preface; Part One Electron beam pasteurization in food processing; 1 Introduction to electron beam pasteurization in food processing; 1.1 Introduction; 1.2 Food irradiation; 1.3 Emerging trends in non-thermal food processing; 1.4 The focus of this book; References; 2 Electron beam processing technology for food processing; 2.1 Introduction; 2.2 Consumers and irradiated foods 2.3 The physics of electron beam irradiation 2.4 Electron beam linear accelerator system; 2.5 Conveyor system; 2.6 Facility safety and chamber design; 2.7 Facility processing controls; 2.8 Government regulations for electron beam facilities; 2.9 Conclusion; References; 3 Integrating electron beam equipment into food processing facilities: strategies and design considerations; 3.1 Introduction; 3.2 Radiation processing standards and terminology; 3.3 Assessing the right dose; 3.4 Design issues in integrating eBeam equipment into a food processing operation; 3.5 Design in practice: a case study

3.6 Common configurations for eBeam technology in food processing operations
Part Two Complementary food processing technologies; 4 Microwave processing of foods and its combination with electron beam processing; 4.1 Introduction; 4.2 Physical principles of microwave processing; 4.3 Microwave applications; 4.4 Modelling and verification; 4.5 Summary; 4.6 Sources of further information; References; 5 Infrared heating of foods and its combination with electron beam processing; 5.1 Introduction; 5.2 The use of infrared technology in food processing; 5.3 Infrared processing of liquid foods
5.4 Equipment for infrared processing
5.5 Limitations of infrared processing; 5.6 Combination of infrared processing with electron beam processing; 5.7 Conclusions; References; 6 Aseptic packaging of foods and its combination with electron beam processing; 6.1 Introduction; 6.2 Brief history of aseptic packaging; 6.3 Microorganisms in foods and influencing factors; 6.4 Principles of aseptic food packaging; 6.5 Possible application of electron beam technology for aseptic food processing; 6.6 Electron beam technology for sterilizing packaging materials used in aseptic packaging
6.7 Current and future technical challenges
References; 7 Combining sanitizers and nonthermal processing technologies to improve fresh-cut produce safety; 7.1 Introduction; 7.2 Fresh produce safety; 7.3 Sanitizers used in fresh-cut processing; 7.4 Chlorine as a sanitizer; 7.5 Chlorine dioxide sanitizer technologies; 7.6 Organic acid sanitizers; 7.7 Electrolyzed water (EW) sanitizer; 7.8 Nonthermal processing technologies: ultrasound-assisted fresh produce decontamination; 7.9 Ionizing radiation for fresh produce decontamination; 7.10 Nonthermal plasma (NTP) for fresh produce decontamination
7.11 High pressure processing (HPP) for fresh produce decontamination

Sommario/riassunto

Food safety is a constant challenge for the food industry. *Electron Beam Pasteurization and Complementary Food Processing Technologies* explores applications in conjunction with other food processing technologies.
