

TRACING PATHOGENS IN THE FOOD CHAIN

Brul, S. – Fratamico, P. M. – McMeekin, T. A. (Editors)
Cambridge : Woodhead Publishing, 2010. 640 pp.
ISBN 1 84569 496 1, ISBN-13: 978 1 84569 496 8

The epidemiology, transmission and surveillance of pathogens in food production chains are highly important for food safety. Modern and reliable methods offer the new possibilities for tracing of undesired microorganisms along the food chain and for food safety control.

This book reviews key aspects of the surveillance and spread of food-borne pathogens in industrial food production and food processing, and sets the scene for the application of novel technologies for tracing pathogens in the food chain.

The book includes four parts with 23 chapters.

Part one provides an introduction to food-borne pathogen surveillance, outbreak investigation and control. This chapter describes some of the surveillance methods that can be used on an international basis. It describes some of the international outbreaks identified with various pathogens and foods involved. Limitations to surveillance activities limitations and future trends are summarized.

Part two concentrates on subtyping of food-borne pathogens, including chapters on phenotypic subtyping, pulsed-field gel electrophoresis and other commonly used molecular subtyping methods, and emerging methods of nucleic acid-based and protein-based technologies. The method validation and quality assurance are also covered in this part of the book.

Part three focuses on molecular methods and other emerging approaches in the surveillance and study of pathogens, such as protein-based analysis, virulotyping, ribotyping and comparative genomics. The special consideration is dedicated to sample preparation for the detection of food-borne pathogens by molecular biological methods, such as the polymerase-chain reaction, as a key to their successful application in food analysis. The separation of bacterial targets from food matrices is introduced as the main methodological approach. A broad overview of several approaches to sample preparation using different physical, biological, biochemical and chemical methods is presented.

Part four deals with the tracing of pathogens in particular food chains, such as meat, fish, poultry and egg, dairy, shellfish, as well as fruit and vegetable production chains. Special interest is focused on *Salmonella*, patho-

genic *E. coli* and *Campylobacter* in red meat and game production chains, and their antibiotic multi-resistance, and further to *Listeria monocytogenes*, *Salmonella*, *Vibrio*, *Clostridium* and *Bacillus* in fish and shellfish production chain, or to zoonotic pathogenic bacteria and protozoans in dairy production chain. Primary role of HACCP, the combination of risk assessment and monitoring to reduce the exposure of consumers to levels of pathogens that may cause infection is described.

This book will be useful to researchers, public health experts and food industry professionals concerned with the control of food-borne disease and food safety.

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IMPROVING THE SAFETY AND QUALITY OF EGGS AND EGG PRODUCTS

Volume 1: Egg chemistry, production and consumption

Nys, Y. – Bain, M. – Van Immerseel, F. (Editors)
Cambridge : Woodhead Publishing, 2011. 632 pp.
ISBN 1 84569 754 5, ISBN-13: 978 1 84569 754 9

Volume 2: Egg safety and nutritional quality

Van Immerseel, F. – Nys, Y. – Bain, M. (Editors)
Cambridge : Woodhead Publishing, 2011. 448 pp.
ISBN 0 85709 072 0, ISBN-13: 978 0 85709 072 0

These books focus on egg chemistry, production and consumption. They refer to the factors that can impact egg quality, reviews recent research in the areas of disease, egg quality and the development of new technologies to assure egg safety. The books comprehensively cover organic, free-range and processed egg production.

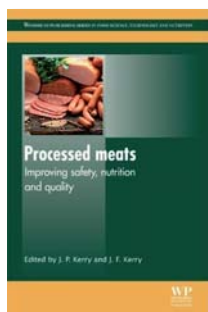
Volume 1 focuses on egg chemistry, production and consumption. Part one sets the scene with information on egg production and consumption in certain countries. Part two then provides essential information on egg formation and chemistry. Factors that impact egg quality are the focus of part three. Chapters cover the role of poultry breeding, hen nutrition and laying environment, among other significant topics. Part four addresses organic and free-range egg production, the impact of egg production on the environment and non-poultry eggs. A chapter on processed egg products completes the volume.

Volume 2 focuses on egg safety and nutritional quality. Part one provides an overview of egg contaminants, covering both microbial pathogens and chemical residues. *Salmonella* control in laying hens is the focus of part two. Chapters cover essential topics such as monitoring and control procedures in laying flocks, as well as egg decontamination methods. Finally, part three looks at the role of eggs in nutrition and other health applications. Chapters cover dietary cholesterol, egg allergy, egg enrichment and bioactive fractions of eggs, among other topics.

Both books are essential references for managers in the egg industry, food industry and those with a research interest in egg microbiology, hygiene and technology.

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PROCESSED MEATS Improving safety, nutrition and quality

Kerry, J. P. – Kerry, J. F. (Editors)
Cambridge : Woodhead Publishing, 2011. 752 pp.
ISBN 1 84569 466 X, ISBN-13: 978 1 84569 466 1

This comprehensive book provides professionals with a wide-ranging guide to the market for processed meats, product development, ingredient options, processing technologies and quality assessment. It also outlines the key issues in producing processed meat products that are nutritionally balanced, contain fewer ingredients, have excellent sensory characteristics and are safe to eat. The book discusses the use of nutraceutical ingredients in processed meat products and their effects on product quality, safety and acceptability.

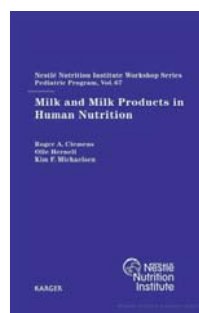
Part one explores consumer demands and trends, legislative issues, key aspects of food safety and the use of sensory science in product development, among other issues. Part two examines the role of ingredients, including blood by-products, hydrocolloids and natural antimicrobials, as well as the formulation of products with reduced levels of salt and fat. Nutraceutical ingredients are also covered. Part three discusses processing of meat products including formation of some contaminants, the role of packaging and refrigeration alongside emerging areas such as high pressure processing and novel thermal technologies. Chapters on quality assessment and the

quality of particular types of products are also included.

With its distinguished editors and team of expert contributors, *Processed meats: Improving safety, nutrition and quality* is really a valuable reference tool for professionals working in the processed meat industry and academics studying processed meat topics.

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MILK AND MILK PRODUCTS IN HUMAN NUTRITION

67th Nestlé Nutrition Institute Workshop,
Pediatric Program, Marrakech, March 2010
Clemens, R. A. – Hernell, O. – Michaelsen, K. F. (Editors)
Nestlé Nutrition Institute Workshop Series, Vol. 67
Basel : S. Karger, 2011. 220 pp.
ISSN: 1664-2147, e-ISSN: 1664-2155

The role of milk during the life cycle – a global view

Milk, the first and for a time the only source of nutrition for mammals, influences early growth and development and may provide a foundation for health throughout the entire lifespan. It is therefore mandatory that milk substitutes have a composition which fulfills the same goals and confers as close as possible the overall health benefits of human milk. Moreover, in many populations, milk continues to play a major role in a healthy and balanced diet throughout life: During childhood, pregnancy and adulthood, intake of cows' milk has important beneficial effects on linear growth, bone development and against the risk of developing caries, and it is important in the prevention and treatment of undernutrition in low-income countries. This publication contains the presentations and discussions of the Nestlé Nutrition Institute Workshop held in Marrakech in March 2010. It focuses on three main topics: milk during pregnancy and infancy, milk during childhood in low- and high-income countries, and general aspects of milk in adult nutrition. Together, these contributions cover most aspects of milk during the life cycle in a global perspective, making the publication a comprehensive textbook.

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