

ADVANCED TECHNOLOGIES FOR MEAT PROCESSING

Edited by
Leo M. L. Nollet
Fidel Toldrá



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Preface

Meat and meat products constitute some of the most important foods in Western societies. However, the area of meat science and technology is not as fully covered as other foods from the point of view of books dealing with such important aspects as quality, analysis, and processing technology. It must be pointed out that the meat industry has incorporated important technological developments in recent years.

The main goal of this book is to provide the reader with recent developments in new technologies for the full meat processing chain. It starts with the production systems through the use of modern biotechnology (chapters 1 and 2); followed by automation in slaughterhouses (chapter 3); rapid nondestructive online detection systems (chapters 4, 5, and 6); the description of new technologies such as decontamination, high-pressure processing, fat reduction, functional meat compounds such as peptides or antioxidants, processing of nitrite-free products, and dry-cured meat products (chapters 7–14). Bacteriocins against meat-borne pathogens and the latest developments in bacterial starters for improved flavor in fermented meats are discussed in chapters 15 and 16. The two remaining chapters (17 and 18) detail recent final product packaging systems.

This book is written by distinguished international contributors with extensive experience and solid reputations. It brings together all the advances in such varied and different technologies as biotechnology, irradiation, high pressure, and active packaging to be applied in different stages of meat processing.

For all their efforts and for sharing their knowledge on these different topics we would like to thank very cordially all contributors of this volume.

Editors

Leo M. L. Nollet is professor of biotechnology at Hogeschool Gent, Ghent, Belgium. The author and coauthor of numerous articles, abstracts, and presentations, Dr. Nollet is also the editor of the three-volume *Handbook of Food Analysis* (Second Edition), *Handbook of Water Analysis, Food Analysis by HPLC* (Second Edition) and *Chromatographic Analysis of the Environment* (Third Edition).

His research interests include air and water pollution, liquid chromatography, and applications of different chromatographic techniques in food, water, and environmental parameters analysis.

He earned a master's degree (1973) and a Ph.D. (1978) in biology from the Katholieke Universiteit Leuven, Belgium.

Fidel Toldrá earned a bachelor's degree in chemistry in 1980, a high degree in food technology in 1981, and a Ph.D. in chemistry in 1984. He is research professor and head of the Laboratory of Meat Science at the Instituto de Agroquímica y Tecnología de Alimentos (CSIC), Valencia, Spain. He is also associate professor of food technology at the Polytechnical University of Valencia.

Professor Toldrá has received several awards such as the 2002 International Prize for Meat Science and Technology. He has authored and coauthored many book chapters, research articles, and patents. He has authored one book and coedited nine others. Professor Toldrá is the editor of the journal *Trends in Food Science and Technology*, editor-in-chief of the new journal *Current Nutrition & Food Science*, and a member of the editorial boards of *Meat Science*, *Food Chemistry*, and *Journal of Muscle Foods*.

His research interests are based on food chemistry and biochemistry, with a special focus on muscle foods. He serves on the Executive Committee of the European Federation of Food Science and Technology and the Scientific Commission on Food Additives of the European Food Safety Authority.

Contents

Chapter 1

Bioengineering of Farm Animals: Meat Quality and Safety 1
Morse B. Solomon, Janet S. Eastridge, and Ernest W. Paroczay

Chapter 2

Gene Technology for Meat Quality 21
John L. Williams

Chapter 3

Automation for the Modern Slaughterhouse 43
Graham Purnell and Mark Loeffen

Chapter 4

Hot-Boning of Meat: A New Perspective 73
Declan J. Troy

Chapter 5

New Spectroscopic Techniques for Online Monitoring of Meat Quality 87
Kjell Ivar Hildrum, Jens Petter Wold, Vegard H. Segtnan, Jean-Pierre Renou, and Eric Dufour

Chapter 6

Real-Time PCR for the Detection of Pathogens in Meat 131
Petra Wolffs and Peter Rådström

Chapter 7

Meat Decontamination by Irradiation 155
D. U. Ahn, E. J. Lee, and A. Mendonca

Chapter 8

Application of High Hydrostatic Pressure to Meat and Meat Processing 193
Atsushi Suzuki, Ken Kim, Hiroyuki Tanji, Tadayuki Nishiumi, and Yoshihide Ikeuchi

Chapter 9

Hydrodynamic Pressure Processing to Improve Meat Quality and Safety 219
Morse B. Solomon, Martha N. Liu, Jitu R. Patel, Brian C. Bowker, and Manan Sharma

Chapter 10
 Functional Properties of Bioactive Peptides Derived From Meat Proteins 245
Keizo Arihara

Chapter 11
 New Approaches for the Development of Functional Meat Products..... 275
Francisco Jiménez-Colmenero, Milagro Reig, and Fidel Toldrá

Chapter 12
 Processing of Nitrite-Free Cured Meats 309
Ronald B. Pegg and Fereidoon Shahidi

Chapter 13
 Biochemical Proteolysis Basis for Improved Processing
 of Dry-Cured Meats..... 329
Fidel Toldrá

Chapter 14
 Vacuum Salting Treatment for the Accelerated Processing
 of Dry-Cured Ham..... 353
José M. Barat, Raul Grau, Pedro Fito, and Amparo Chiralt

Chapter 15
 The Use of Bacteriocins Against Meat-Borne Pathogens 371
*Teresa Aymerich, Margarita Garriga, Anna Jofré, Belén Martín,
 and Joseph M. Monfort*

Chapter 16
 Latest Developments in Meat Bacterial Starters..... 401
Régine Talon and Sabine Leroy

Chapter 17
 Modified Atmosphere Packaging 419
Joseph G. Sebranek and Terry A. Houser

Chapter 18
 Perspectives for the Active Packaging of Meat Products 449
Véronique Coma

Index 473