Egg Science And Technology Fourth Edition

Eggs and Health Promotion provides up-to-date research on the use of eggs in human health. This single, convenient reference deals with the role of eggs in diet, nutrition, and disease. The book also includes current scientific data on the use of eggs to produce and deliver drugs, nutrients, and immunotherapies in patients. Written by well-known and highly respected scientists, this book will be of interest to health practitioners and scientists; pharmacologists; and commercial egg producers. Dispelling misconceptions and covering significant recent advances in egg use, Eggs and Health Promotion makes an important contribution to the literature on the role of eggs in human health, nutrition, and disease treatment and prevention. Key chapters include the health implications and benefits of egg consumption, production of antibodies in eggs for medical use, veterinary drug residues, egg safety, and egg and health myths and misconceptions.

It is now over one hundred years since von Behring and Kitsato first concluded experiments that led to the use of passive immunisation, employing antibodies raised in animals against tetanus and diphtheria toxins. The advancement of technology both in manufacturing purity product in a cost effective way and the clinical research has proved that antibodies are one ofthe most successful products in biotechnology. Monoclonal antibodies account for between one-third and one-halfof all pharmaceutical products in development and human clinical trials. Both the nature of monoclonal antibody therapies and the relatively large size of the monoclonal antibody dictate the production requirements, for many ofthese therapeutics the monoclonal antibody product will be 100 kilogrammes or more per year. It is widely acknowledged that there is currently a worldwide shortage of biomanufacturing capacity, and the active pharmaceutical ingredient material requirements for these products are expected to increase. Thus the industry is looking for new sources and extensive studies are being carried out not only for alternative technology to meet the needs but also to reveal the new therapeutic applicationsofantibodies. This book brings to the forefront current advances in novel technologies for the manufacturing of monoclonal antibodies and also their extensive clinical importance. The first four chapters give an overview of the new technologies and the successful application in the manufacture of monoclonal antibodies with clinical purity. The next chapters address the application of antibodies in cancer therapy and functional genomic therapy.

This authoritative two-volume reference provides valuable, necessary information on the principles underlying the production of microbiologically safe and stable foods. The work begins with an overview and then addresses four major areas: 'Principles and application of food preservation techniques' covers the specific techniques that defeat growth of harmful microorganisms, how those techniques work, how they are used, and how their effectiveness is measured. 'Microbial ecology of different types of food' provides a food-by-food accounting of food composition, naturally occurring microflora, effects of processing, how spoiling can occur, and preservation. 'Foodborne pathogens' profiles the most important and the most dangerous microorganisms that can be found in foods, including bacteria, viruses, parasites, mycotoxins, and 'mad cow disease.' The section also looks at the economic aspects and long-term consequences of foodborne disease. 'Assurance of the microbiological safety and quality of foods' scrutinizes all aspects of quality assurance, including HACCP, hygienic factory design, methods of detecting organisms, risk assessment, legislation, and the design and accreditation of food microbiology laboratories. Tables, photographs, illustrations, chapter-by-chapter references, and a thorough index complete each volume. This reference is of value to all academic, research, industrial and laboratory libraries supporting food programs; and all institutions involved in food safety, microbiology and food microbiology, quality assurance and assessment, food legislation, and generally food science and technology.

The egg is a chemical storehouse-within an incubating egg a complicated set of chemical reactions take place that convert the chemicals into a living animal. Using hen eggs as a model, this new text explores the use of eggs for food, industrial, and pharmaceutical applications. It covers the chemistry, biology, and function of lipids; carbohydrates; proteins; yolk antibody (IgY); and other materials of eggs. The novel merits of egg materials over others used in the same products are also discussed. These areas of egg technology have never been compiled before in one source.

Producing Safe Eggs: Microbial Ecology of Salmonella takes the unique approach of interfacing problems of Salmonella and microbial contamination with commercial egg production. It presents in-depth information on microbial contamination, safety and control, physiology, immunology, neurophysiology, and animal welfare, which makes this book a complete reference for anyone involved in the safe production of eggs and egg products in the food industry. This book discusses management and risk factors across the entire egg production process, including practical applications to decrease disease and contaminated food products in poultry houses, processing plants and retail businesses. It is an integral reference for food scientists, food safety and quality professionals, food processors, food production managers, and food business owners, as well as students in food science, safety, microbiology, and animal science. Includes pre- and post-harvest control measures to reduce microbial contamination and salmonella risks Presents hot topics regarding vaccination, egg-in-shell pasteurization, and other new technologies currently under development Provides risk assessment strategies for implementation in business operations Discusses management and risk factors across the entire egg production process, including practical applications to decrease disease and contaminated food products in poultry houses, processing plants, and retail businesses Offers a complete reference for anyone involved in the safe production of eggs and egg products in the food industry

Since many processes in the food industry involve fluid flow and heat and mass transfer, Computational Fluid Dynamics (CFD) provides a powerful early-stage simulation tool for gaining a qualitative and quantitative assessment of the performance of food processing, allowing engineers to test concepts all the way through the development of a process or system. Published in 2007, the first edition was the first book to address the use of CFD in food processing applications, and its aims were to present a comprehensive review of CFD applications for the food industry and pinpoint the research and development trends in the development of the technology; to provide the engineer and technologist working in research, development, and operations in the food industry with critical, comprehensive, and readily accessible information on the art and science of CFD; and to serve as an essential reference source to undergraduate and postgraduate students and researchers in universities and research institutions. This will continue to be the purpose of this second edition. In the second edition, in order to reflect the most recent research and development trends in the technology, only a few original chapters are updated with the latest developments. Therefore, this new edition mostly contains new chapters covering the analysis and optimization of cold chain facilities, simulation of thermal processing and modeling of heat exchangers, and CFD applications in other food processes.

Advances in food science, technology, and engineering are occurring at such a rapid rate that obtaining current, detailed information is challenging at best. While almost everyone engaged in these disciplines has accumulated a vast variety of data over

time, an organized, comprehensive resource containing this data would be invaluable to have. The
Now in its third edition, this classic volume characterizes the science and technology of the poultry industry today, defines the breadth and scope of the overall problems in the industry, and points out areas where more research is needed. With special attention to recent changes in the industry, the nearly two dozen updated chapters of Poultry Products Technology provide a comprehensive overview of the field, examining topics which deal with the processing, handling, marketing, and preparation of poultry meat, products, and by-products. Poultry Products Technology provides up-to-date information and references for food scientists, food technologists, dieticians, and others trained in the food service industry, who will at some point handle poultry products. This book supplies knowledge about how poultry and eggs are processed and prepared and how they can be used for optimum portions and services. The breadth of topics covered, as listed below, make it an ideal text for those just entering the field, for individuals who wish to learn about the work in a particular area before starting extensive research, and for those in the industry who require specific information for making decisions and projecting plans for the future: quality identification--grades and standards quality maintenance--handling and processing poultry and eggs to prevent grade losses chemical and nutritive characteristics of poultry meat and eggs microbiology of eggs and poultry meat methods of preservation--freezing, drying, refrigeration, radiation, canning, smoking cooking poultry meat and eggs handling and uses of inedible by-products methods of analysis of eggs and egg products During the last twenty years, the consumption of poultry meat has and continues to increase while the consumption of eggs has steadily decreased, yet both are still considered good economic and dietary values. This classic volume is intended for poultry and food technology students, but with its new, timely examples, it can be used as a general reference book for those who need quick general knowledge in a specific area of the poultry industry.
This new edition is your complete source of information on egg handling, procesing, and utilization. Experts in the field review the egg industry and examine egg production practices, quality identification and control, egg and egg product chemistry, and specialized processes such as freezing, pasteurization, desugarization, and dehydration. This updated edition explores new and recent trends in the industry and new material on the microbiology of shell eggs, and it presents a brand-new chapter on value-added products. Full of the information necessary to stay current in the field, Egg Science and Technology, Fourth Edition is the essential reference for everyone involved in the egg industry. Book jacket.
This title focuses on the comprehension of the properties of water in foods, enriched by the approaches from polymer and materials sciences, and by the advances of analytical techniques. The International Symposium on the Properties of Water (ISOPOW) promotes the exchange of knowledge between scientists involved in the study of food materials and scientists interested in water from a more basic point of view and the dialogue between academic and industrial scientists/technologists. This comprehensive book covers the topics presented at the 10th ISOPOW held in Bangkok, Thailand in 2007, including water dynamics in various systems, the role of water in functional food and nano-structured biomaterials. Special features include: Latest findings in the properties of water in food, pharmaceutical and biological systems Coverage of the 10th International Symposium on the Properties of Water (ISOPOW) Includes water dynamics, water in foods stability, and water in micro and nano-structured food and biomaterials Reflects the vast array of research and applications of water world wide
Bioactive Egg Compounds presents the latest results and concepts in the biotechnological use of egg compounds. Following an introduction to the different compounds of egg white, yolk and shell, the nutritive value of egg compounds is discussed. The text describes procedures for processing egg compounds to improve their nutritive value, including so-called enriched eggs. Also described is the isolation and application of egg compounds with special properties, such as antibiotic action.
The egg industry; Egg production practices; Quality identification of shell eggs; Quality preservation of shell eggs; The microbiology of eggs; Chemistry of eggs and egg products; Nutritive value of eggs; Merchandising eggs in supermarkets; Egg-products industry; Egg breaking; Freezing egg products; Egg product pasteurization; Desurgarization; Egg dehydration; Quality control and product specifications; Functional properties in foods; Uses other than in human foods; Egg product, process, and equipment patents (U.S); Selected bibliography of doctoral dissertations on eggs and egg; Products.
This volume covers many new trends and developments in food science, including preparation, characterization, morphology, properties, and recyclability. The volume considers food quality, shelf life, and manufacturing in conjunction with human nutrition, diet, and health as well as the ever-growing demand for the supply and production of healthier foods. Distinguished scientists specializing in various disciplines discuss basic studies, applications, recent advances, difficulties, and breakthroughs in the field. The volume includes informative discussions and new research on food formulations, manufacturing techniques, biodegradably flexible packaging, packaged foods, beverages, fruits and vegetable processing, fisheries, milk and milk products, frozen food and thermo processing, grain processing, meat and poultry processing, rheological characteristics of foods, heat exchangers in the food industry, food and health (including natural cures and food supplements), spice and spice processing, and more.
Consumers around the world have become better educated and more demanding in their identification and purchase of quality health-promoting foods; therefore the food industry requires innovative technologies to provide their clientele with safe and stable foods that meet safety regulations . Improving Food Quality with Novel Food Processing Technolo
PRINT/ONLINE PRICING OPTIONS AVAILABLE UPON REQUEST AT e-reference@taylorandfrancis.com Containing case studies that complement material presented in the text, the vast range of this definitive Encyclopediaencompasses animal physiology, animal growth and development, animal behavior, animal reproduction and breeding, alternative approaches to animal maintenance, meat science and muscle biology, farmed animal welfare and bioethics, and food safety. With contributions from top researchers in their discipline, the book addresses new research and advancements in this burgeoning field and provides quick and reader-friendly descriptions of technologies critical to professionals in animal and food science, food production and processing, livestock management, and nutrition.

Now in a thoroughly-updated and expanded second edition, Wiley Encyclopedia of Food Science and Technology covers fundamental concepts and practical requirements in food science, as well as cutting-edge technological and industry information. The encyclopedia features A-to-Z coverage of all aspects of food science, including: the properties, analysis, and processing of foods; genetic engineering of new food products; and nutrition. In addition, nontechnical information is included, such as descriptions of selected scientific institutions, and research and development in government agencies. Like the first edition, this Second Edition will become the standard reference for food scientists, bioengineers, and biotechnologists. From reviews of the first edition: "...fills a definite need in the food science and technology literature.... I have little doubt that this encyclopedia will become one of the classic works in this ever-growing subject." —Food and Chemistry

This first edited Volume on IgY-Technology, addresses the historical and dynamic development of IgY-applications. The authors cover the biological basis and theoretical context, methodological guidance, and applications of IgY-Technology. A focus is laid on the use of IgY-antibodies for prophylactic/therapeutic purposes in human and veterinary medicine. Aside from applications, the chapters also offer an evolutionary understanding of the IgY molecule, IgY receptors and practical prerequisites to produce IgY-antibodies. Guidance is given for every step of the process. Starting with an introduction to hens as a model species and including hen husbandry, hen egg-laying capacity and total IgY outcomes. Readers will also learn about immunization techniques, the advantages and limitations of different IgY extraction methods, as well as storage stability of the final product. The last part of the volume highlights hands-on aspects of applications, such as IgY delivery strategies, new methods to produce monoclonal IgY-antibodies or production of functional IgY fragments by phage-display as well as commercial exploitation of the technology. Thus, this book is a valuable resource and guide for Scientists, Clinicians and Health Product Developers in both human and veterinary medicine.

Written by the world's leading scientists and spanning over 400 articles in three volumes, the Encyclopedia of Food Microbiology, Second Edition is a complete, highly structured guide to current knowledge in the field. Fully revised and updated, this encyclopedia reflects the key advances in the field since the first edition was published in 1999 The articles in this key work, heavily illustrated and fully revised since the first edition in 1999, highlight advances in areas such as genomics and food safety to bring users up-to-date on microorganisms in foods. Topics such as DNA sequencing and E. coli are particularly well covered. With lists of further reading to help users explore topics in depth, this resource will enrich scientists at every level in academia and industry, providing fundamental information as well as explaining state-of-the-art scientific discoveries. This book is designed to allow disparate approaches (from farmers to processors to food handlers and consumers) and interests to access accurate and objective information about the microbiology of foods Microbiology impacts the safe presentation of food. From harvest and storage to determination of shelf-life, to presentation and consumption. This work highlights the risks of microbial contamination and is an invaluable go-to guide for anyone working in Food Health and Safety Has a two-fold industry appeal (1) those developing new functional food products and (2) to all corporations concerned about the potential hazards of microbes in their food products
The Technology of Wafers and Waffles: Operational Aspects is the definitive reference book on wafer and waffle technology and manufacture. It covers specific ingredient technology (including water quality, wheat flour, starches, dextrins, oils and fats) and delves extensively into the manufacturing elements and technological themes in wafer manufacturing, including no/low sugar wafers, hygroscopic wafers, fillings and enrobing. The book explains, in detail, operating procedures such as mixing, baking, filling, cooling, cutting and packaging for every type of wafer: flat and shaped wafers for making biscuits, ice cream cones, cups, wafer reels, wafer sticks (flute wafers) and biscuit wafers. It also explores the various types of European (Belgian) waffles and North American frozen waffles. Serves as a complete reference book on wafer and waffle technology and manufacturing, the first of its kind Covers specific ingredient technology such as water quality, wheat flour, starches, dextrins, oils and fats for wafer and waffles Explores wafer and waffle product types, development, ingredients, manufacturing and quality assurance Explains the scientific background of wafer and waffle baking Informs both artisan and industrial bakers about many related areas of bakery product manufacturing

The safety of poultry meat and eggs continues to be a major concern for consumers. As a result, there has been a wealth of research on identifying and controlling hazards at all stages in the supply chain. Food safety control in the poultry industry summarises this research and its implications for all those involved in supplying and marketing poultry products. The book begins by analysing the main hazards affecting poultry meat and eggs, both biological and chemical. It then discusses methods for controlling these hazards at different stages, from the farm through slaughter and carcass processing operations to consumer handling of poultry products. Further chapters review established and emerging techniques for decontaminating eggs or processed carcasses, from physical methods to the use of bacteriophage and bacteriocins. With its distinguished editor and international team of contributors, Food safety control in the poultry industry is a standard reference for both academics and food companies. Reviews recent research on identifying and controlling hazards at all stages in the supply chain Edited by a leading expert in this hot area with contributions from a worldwide team of experts Identify how to meet and excede consumers high expectations in food safety

Egg Science and TechnologyCRC Press

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Known for its accessible, precise approach, Epp's DISCRETE MATHEMATICS WITH APPLICATIONS, 5th Edition, introduces discrete mathematics with clarity and precision. Coverage emphasizes the major themes of discrete mathematics as well as the reasoning that underlies mathematical thought. Students learn to think abstractly as they study the ideas of logic and proof. While learning about logic circuits and computer addition, algorithm analysis, recursive thinking, computability, automata, cryptography and combinatorics, students discover that ideas of discrete mathematics underlie and are essential to today’s science and technology. The author’s emphasis on reasoning provides a foundation for computer science and upper-level mathematics courses. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Here is the complete source of information on egg handling, processing, and utilization. Egg Science and Technology, Fourth Edition covers all aspects of grading, packaging, and merchandising of shell eggs. Full of the information necessary to stay current in the field, Egg Science and Technology remains the essential reference for everyone involved in the egg industry. In this updated

guide, experts in the field review the egg industry and examine egg production practices, quality identification and control, egg and egg product chemistry, and specialized processes such as freezing, pasteurization, desugarization, and dehydration. This updated edition explores new and recent trends in the industry and new material on the microbiology of shell eggs, and it presents a brand-new chapter on value-added products. Readers can seek out the most current information available in all areas of egg handling and discover totally new material relative to fractionation of egg components for high value, nonfood uses. Contributing authors to Egg Science and Technology present chapters that cover myriad topics, ranging from egg production practices to nonfood uses of eggs. Some of these specific subjects include: handling shell eggs to maintain quality at a level for customer satisfaction trouble shooting problems during handling chemistry of the egg, emphasizing nutritional value and potential nonfood uses merchandising shell eggs to maximize sales in refrigerated dairy sales cases conversion of shell eggs to liquid, frozen, and dried products value added products and opportunities for merchandising egg products as consumers look for greater convenience Egg Science and Technology is a must-have reference for agricultural libraries. It is also an excellent text for upper-level undergraduate and graduate courses in food science, animal science, and poultry departments and is an ideal guide for professionals in related food industries, regulatory agencies, and research groups.

A comprehensive reference for the poultry industry—Volume 1 describes everything from husbandry up to preservation With an unparalleled level of coverage, the Handbook of Poultry Science and Technology provides an up-to-date and comprehensive reference on poultry processing. Volume 1 describes husbandry, slaughter, preservation, and safety. It presents all the details professionals need to know beginning with live poultry through to the freezing of whole poultry and predetermined cut parts. Throughout, the coverage focuses on one paramount objective: an acceptable quality and a safe product for consumer purchase and use. The text includes safety requirements and regulatory enforcement in the United States, EU, and Asia. Volume 1: Primary Processing is divided into seven parts: Poultry: biology to pre-mortem status—includes such topics as classification and biology, competitive exclusion, transportation to the slaughterhouse, and more Slaughtering and cutting—includes the slaughterhouse building and required facilities, equipment, and operations; carcass evaluation and cutting; kosher and halal slaughter; and more Preservation: refrigeration and freezing—includes the biology and physicochemistry of poultry meat in rigor mortis under ambient temperature, as well as changes that occur during freezing and thawing; engineering principles; equipment and processes; quality; refrigeration and freezing for various facilities; and more Preservation: heating, drying, chemicals, and irradiation Composition, chemistry, and sensory attributes—includes quality characteristics, microbiology, nutritional components, chemical composition, and texture of raw poultry meat Eggs—includes egg attributes, science, and technology Sanitation and Safety—includes PSE, poultry-related foodborne diseases, OSHA requirements, HACCP and its application, and more

Now in its third edition, this classic volume characterizes the science and technology of the poultry industry today, defines the breadth and scope of the overall problems in the industry, and points out areas where more research is needed. With special attention to recent changes in the industry, the nearly two dozen updated chapters of Poultry Products Technology provide a comprehensive overview of the field, examining topics which deal with the processing, handling, marketing, and preparation of poultry meat, products, and by-products. Poultry Products Technology provides up-to-date information and references for food scientists, food technologists, dieticians, and others trained in the food service industry, who will at some point handle poultry products. This book supplies knowledge about how poultry and eggs are processed and prepared and how they can be used for optimum portions and services. The breadth of topics covered, as listed below, make it an ideal text for those just entering the field, for individuals who wish to learn about the work in a particular area before starting extensive research, and for those in the industry who require specific information for making decisions and projecting plans for the future: quality identification--grades and standards quality maintenance--handling and processing poultry and eggs to prevent grade losses chemical and nutritive characteristics of poultry meat and eggs microbiology of eggs and poultry meat methods of preservation--freezing, drying, refrigeration, radiation, canning, smoking cooking poultry meat and eggs handling and uses of inedible by-products methods of analysis of eggs and egg products During the last twenty years, the consumption of poultry meat has and continues to increase while the consumption of eggs has steadily decreased, yet both are still considered good econ

Eggs are economical and of high nutritional value, yet can also be a source of foodborne disease. Understanding of the factors influencing egg quality has increased in recent years and new technologies to assure egg safety have been developed. Improving the safety and quality of eggs and egg products reviews recent research in these areas. 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. With its distinguished editors and international team of contributors, Volume 1 of Improving the safety and quality of eggs and egg products is an essential reference for managers in the egg industry, professionals in the food industry using eggs as ingredients and all those with a research interest in the subject. Focuses on egg chemistry, production and consumption with reference to the factors than can impact egg quality Reviews recent research in the areas of disease, egg quality and the development of new technologies to assure egg safety Comprehensively covers organic, free-range and processed egg production

Eggs are economical and of high nutritional value, yet can also be a source of foodborne disease. Understanding of the factors influencing egg quality has increased in recent years and new technologies to assure egg safety have been developed. Improving the safety and quality of eggs and egg products reviews recent research in these areas 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 and 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. With its distinguished editors and international team of contributors, Volume 2 of Improving the safety and quality of eggs and egg products is an essential reference for managers in the egg industry, professionals in the food industry using eggs as ingredients and all those with a research interest in the subject. Focuses on egg safety and nutritional quality with reference to egg contaminants such as Salmonella Enteritidis Chapters discuss essential topics such as monitoring and control procedures in laying flocks and egg decontamination methods Presents a comprehensive overview of the role of eggs in nutrition and other health applications including dietary cholesterol, egg allergy, egg enrichment and bioactive fractions of eggs

Encyclopedia of Food Chemistry is the ideal primer for food scientists, researchers, students and young professionals who want to acquaint themselves with food chemistry. Well-organized, clearly written, and abundantly referenced, the book provides a foundation for readers to understand the principles, concepts, and techniques used in food chemistry applications. Articles are written by international experts and cover a wide range of topics, including food chemistry, food components and their interactions, properties (flavor, aroma, texture) the structure of food, functional foods, processing, storage, nanoparticles for food use, antioxidants, the Maillard and Strecker reactions, process derived contaminants, and the detection of economically-motivated food adulteration. The encyclopedia will provide readers with an introduction to specific topics within the wider context of food chemistry, as well as helping them identify the links between the various sub-

topics. Offers readers a comprehensive understanding of food chemistry and the various connections between the sub-topics Provides an authoritative introduction for non-specialists and readers from undergraduate levels and upwards Meticulously organized, with articles structured logically based on the various elements of food chemistry

A collection of easy and entertaining home science experiments from the creator of the popular "Mentos soda geyser" viral video.

Historical background, step-by-step instruction, materials, permanence. Lucid, careful exposition of all aspects of authentic technique. 85 illustrations.

A two-volume set which traces the history of food and nutrition from the beginning of human life on earth through the present.

Both meat and egg products, produced by the poultry industry, present a challenge during primary processing as the raw materials are obtained from the farm. Over past 50 years line speed has increased at a tremendous rate while more attention has been placed on food safety. The introduction of HACCP programs has helped the industry maintain high standards. The review includes flow diagrams which also point out the potential hazards and suggestions for critical control points, in an HACCP generic model for processing raw poultry meat and a model for pasteurized liquid eggs. Examples of a few hazards and ways to deal with them at the plant level are provided as an illustration of the approach to construct an HACCP plan.

Baking is a process that has been practiced for centuries, and bakery products range in complexity from the simple ingredients of a plain pastry to the numerous components of a cake. While currently there are many books available aimed at food service operators, culinary art instruction and consumers, relatively few professional publications exist that cover the science and technology of baking. In this book, professionals from industry, government and academia contribute their perspectives on the state of industrial baking today. The second edition of this successful and comprehensive overview of bakery science is revised and expanded, featuring chapters on various bread and non-bread products from around the world, as well as nutrition and packaging, processing, quality control, global bread varieties and other popular bakery products. The book is structured to follow the baking process, from the basics, flour and other ingredients, to mixing, proofing and baking. Blending the technical aspects of baking with the latest scientific research, Bakery Products Science and Technology, Second Edition has all the finest ingredients to serve the most demanding appetites of food science professionals, researchers, and students.

Rapid and continued developments in electronics, optics, computing, instrumentation, spectroscopy, and other branches of science and technology resulted in considerable improvements in various methodologies. Due to this revolution in methodology, it is now possible to solve problems which were previously considered difficult to solve. These new methods have led to a better characterization and understanding of foods. The aim of this book is to assemble, for handy reference, various emerging, state-of-the-art methodologies used for characterizing foods. Although the emphasis is on real foods, model food systems are also considered. Methods pertaining to interfaces (food emulsions, foams, and dispersions), fluorescence, ultrasonics, nuclear magnetic resonance, electron spin resonance, Fourier-transform infrared and near infrared spectroscopy, small-angle neutron scattering, dielectrics, microscopy, rheology, sensors, antibodies, flavor and aroma analysis are included. This book is an indispensable reference source for scientists, engineers, and technologists in industries, universities, and government laboratories who are involved in food research and/or development, and also for faculty, advanced undergraduate, graduate and postgraduate students from Food Science, Food Engineering, and Biochemistry departments. In addition, it will serve as a valuable reference for analytical chemists and surface and colloid scientists.

The internet is rife with biased and unsubstantiated claims from the organic industry, and the treatment of issues such as food safety and quality by the media ("if it bleeds, it leads") tends to have a negative impact on consumer perceptions about conventional food. Until recently, more and more consumers in many countries were opting to buy organic food over conventional food, resulting in a radical shift in food retailing. This was due to concerns over chemical residues, food poisoning resulting in recalls, food scares such as "mad-cow" disease, issues like gene-modified (GM foods), antibiotics, hormones, cloning and concerns over the way plants and animals are being grown commercially as food sources. As a result there has been an expansion of the organic industry and the supply of organic foods at farmers' markets, supermarkets and specialty stores. Organic Production and Food Quality: A Down to Earth Analysis is the first comprehensive book on how organic production methods influence the safety and quality of foods, based on an unbiased assessment of the latest scientific findings. The title is a 'must-have' for everyone working within the food industry. Comprehensive explanation of organic production methods and effects on the safety and quality of foods Authoritative, unbiased and up-to-date examination of relevant global scientific research Answers the questions of whether organic food is more nutritious and/or more healthy