

## Recent Books, Summer 2009

JAFAC publishes titles and brief summaries of recent books brought to the attention of the Editor. For consideration, books must be currently available and not more than 2 years old.

### Marine Nutraceuticals and Functional Foods

Edited by Colin Barrow and Fereidoon Shahidi  
CRC Press: Boca Raton, FL, 2008; 506 pp

Discusses a variety of marine nutraceuticals, including  $\omega$ -3 oils, chitin, chitosan, partially hydrogenated chitosan, glucosamine, hydrolyzed marine proteins, marine algae bioactive constituents, nutraceuticals developed from marine microorganisms, shark cartilage, a *Chlorella*-derived polysaccharide complex, and marine sources of calcium.

### Biology and Chemistry of the Jerusalem Artichoke, *Helianthus tuberosus* L. By Stanley J. Kays and Stephen F. Nottingham

CRC Press: Boca Raton, FL, 2008; 495 pp

Summarizes the basic biology and chemistry of *Helianthus tuberosus* L., covering nomenclature, origin, history, classification, identification, distribution, plant morphology and anatomy, chemical composition, inulin chemistry, dietary value, biomass and biofuel uses, genetic resources, breeding, cultivars, propagation, developmental biology, resource allocation and yield, pollinators, pests, diseases, agronomic practices, storage, and economics.

### Handbook of Food Preservation, 2nd ed.

Edited by M. Shafiur Rahman  
CRC Press: Boca Raton, FL, 2007; 1085 pp

Includes 44 chapters grouped in sections on preservation of fresh food products, preservation using chemicals and microbes, preservation by controlling water, structure, and atmosphere, preservation using heat and energy, and enhancing food preservation by an indirect approach.

### Biofilms in the Food Environment

Edited by Hans P. Blaschek, Hua H. Wang, and Meredith E. Agle  
Blackwell and IFT Press: Ames, IA, 2007; 208 pp

Examines biofilms produced by food-borne microorganisms, risks associated with biofilms in the food chain, beneficial applications, and approaches for biofilm removal.

### Food Irradiation Research and Technology

Edited by Christopher H. Sommers and Xuetong Fan  
Blackwell and IFT Press: Ames, IA, 2006; 334 pp

Reviews the science of food irradiation, including advances in  $\gamma$ -ray, electron beam, and X-ray technologies, regulations, food safety, consumer acceptance, detection of irradiated foods,

dosimetry for food processing and research, prevention of meat quality changes, treatments for horticultural products and produce, irradiation of seafood, eggs, nuts, and other potential applications.

### Chemometrics: Statistics and Computer Application in Analytical Chemistry, 2nd ed.

Edited by Matthias Otto  
Wiley: Hoboken, NJ, 2007; 343 pp

A textbook including chapters on the subjects of chemometrics and their application areas, basic statistics, signal processing and time-series analysis, optimization and experimental design, pattern recognition and classification, modeling, analytical databases, knowledge processing and soft computing, quality assurance, and good laboratory practice.

### Trans Fatty Acids

Edited by Albert J. Kijstra, Richard J. Hamilton, and Wolf Hamm  
Blackwell: Oxford, United Kingdom, 2008; 252 pp

Presents the structure, occurrence, nomenclature, biosynthesis, and properties of fatty acids, the epidemiology and health implications of *trans*-fatty acid intake, conjugated linoleic acids and health, analysis of *trans*-mono- and polyunsaturated fatty acids, controlling properties of fat blends and hydrogenation of edible oils, fractionation and interesterification, and food applications with and without *trans*-fatty acids.

### Sweeteners and Sugar Alternatives in Food Technology

Edited by Helen Mitchell  
Blackwell: Oxford, United Kingdom, 2006; 431 pp

Covers nutrition and health considerations such as glycaemic responses, dental health, digestive health, and calorie control. Includes sections on high-potency sweeteners, reduced-calorie bulk sweeteners, other sweeteners, and bulking agents.

### Bakery Products: Science and Technology

Edited by Y. H. Hui, Harold Corke, Ingrid De Leyn, Wai-Kit Nip, and Nanna Cross  
Blackwell: Ames, IA, 2006; 587 pp

Presents an overview of the science and technology of baking, including the biology, chemistry and application of several types of flour, major ingredients used in baking, basics of making yeast bread, baking processes, and selected bakery products.

**Biotechnology in Flavor Production**

Edited by Daphna Havkin-Frenkel and Faith C. Belanger  
*Blackwell: Oxford, United Kingdom, 2008; 226 pp*

Covers several biotechnological approaches currently applied to flavor enhancement, including those used with fermented beverages, dairy products, vanillin, cultured plant cells, tomatoes, rice, apple, basil and other fresh herbs, and potatoes. Includes regulatory aspects of traditional versus bioengineered flavor development.

**Egg Bioscience and Biotechnology**

Edited by Yoshinori Mine  
*Wiley: Hoboken, NJ, 2008; 372 pp*

Focuses on recent advances in bioactive egg components useful as nutraceuticals, pharmaceuticals, and cosmetics. Covers egg structure and chemical composition, eggshell and egg membrane components, egg allergens, novel protein production, and egg products industry future perspectives.

**Anti-Angiogenic Functional and Medicinal Foods**

Edited by Jack N. Losso, Fereidoon Shahidi, and Debasis Bagchi  
*CRC Press: Boca Raton, FL, 2007; 737 pp*

Presents the history and scope of functional foods around the world, "ohmics" technologies and functional foods, angiogenesis and chronic degenerative diseases, and the properties and roles of medicinal and functional foods in angiogenesis.

**Brined Cheeses**

Edited by A. Y. Tamime  
*Blackwell and SDT: Oxford, United Kingdom, 2006; 344 pp*

Part of a series promoted by the Society of Dairy Technology, this book covers a variety of brined cheese varieties, including Feta, Bulgarian white, Akkawi, Halloumi, and Hispanic type, with chapters on brined cheeses from North Africa, the Middle East and Turkey, Latin America, and the Philippines.

**Delivery and Controlled Release of Bioactives in Foods and Nutraceuticals**

Edited by Nissim Garti  
*CRC Press and Woodhead: Boca Raton, FL, and Cambridge, England, 2008; 496 pp*

Presents sections on the effectiveness of controlled release and delivery systems, materials and techniques for controlled release and delivery of nutrients, delivery and controlled release of particular nutraceuticals, and regulatory issues and future trends.

**Food Safety of Proteins in Agricultural Biotechnology**

Edited by Bruce G. Hammond  
*CRC Press: Boca Raton, FL, 2008; 315 pp*

Discusses approaches for the food safety assessment of proteins used in agricultural biotechnology, including bacterial insecticidal proteins, microbial enzymes, biotechnology-derived therapeutic drugs, and bovine somatotropin. Discusses assessment of allergenic potential and the estimation of food intake of proteins.

**Food Colorants: Chemical and Functional Properties**

Edited by Carmen Socaciu  
*CRC Press: Boca Raton, FL, 2008; 647 pp*

Presents information on natural and synthetic food pigments, including biochemistry, stability, bioavailability, human health impacts, sources, production, analysis, quality and safety, as well as the physics of color.

**Fatty Acids in Foods and Their Health Implications, 3rd ed.**

Edited by Ching Kuang Chow  
*CRC Press: Boca Raton, FL, 2008; 1295 pp*

An updated and expanded edition with 49 chapters covering fatty acid classification, chemical and physical properties, analytical methods, fatty acids in a variety of foods, and fatty acid associations with a variety of diseases and aging.

**Bioactive Natural Products; Detection, Isolation, and Structural Determination, 2nd ed.**

Edited by Steven M. Colegate and Russell J. Molyneux  
*CRC Press: Boca Raton, FL, 2007; 624 pp*

In this new edition, most of the chapters have been prepared by authors who did not contribute to the first edition. A multidisciplinary view is stressed, with a variety of methods for detection, isolation, and structure determination, including case studies.

**Mass Spectral and GC Data of Drugs, Poisons, Pesticides, Pollutants and Their Metabolites, 3rd ed.**

Edited by Hans H. Maurer, Karl Pflieger, and Armin A. Weber  
*Wiley: Hoboken, NJ, 2007; 2 volumes, 1452 pp*

Part of the Mass Spectral Library of Drugs, Poisons, Pesticides, Pollutants and Their Metabolites 2007. Volume 1 focuses on methods, with a section on experimental procedures, correlation between structure and fragmentation, formation of artifacts, table of atomic masses, and other tables. Volume 2 contains mass spectra.

**Process-Induced Food Toxicants; Occurrence, Formation, Mitigation, and Health Risks**

Edited by Richard H. Stadler and David R. Lineback  
*Wiley: Hoboken, NJ, 2009; 738 pp*

Contains chapters on specific toxicants related to processing technology, and general considerations for managing existing contaminants, as well as new contaminants formed due to emerging food technologies, nutritional aspects of changes in food processing, and risk/benefit consideration and communication.

**Food Composition and Nutrition Tables, 7th ed. Founded by S. W. Souci, W. Fachmann, and H. Kraut, on behalf of the German Federal Ministry of Food, Agriculture, and Consumer Protection.**

Edited by the German Research Centre for Food Chemistry. Compiled by Eva Kirchhoff  
*MedPharm: Stuttgart, Germany;*  
*CRC Press: Boca Raton, FL, 2008; 1364 pp*

Contains tables compiled from the SFK database of over 800 food items from 13 food groups, and more than 300 food constituents. German, English, and French names of foods, as well as scientific names for raw animal and plant foods are given.

**Spirulina in Human Nutrition and Health**

Edited by M. E. Gershwin and Amha Belay  
*CRC Press: Boca Raton, FL, 2008; 325 pp*

Spirulina, the dried biomass of the cyanobacterium *Arthrospira platensis*, is commonly used as food, a dietary supplement, and a feed supplement. Spirulina production, toxicologic studies and antitoxic properties, therapeutic and protective utility, antioxidant profile, immune system effects, antibacterial activity, and interaction with drugs are presented.

**Natural Sources of Flavourings; Report 3**

*Council of Europe: Strasbourg, France, 2008; 299 pp*

The third report of the Council of Europe's Committee of Experts on Flavouring Substances. Provides evaluations

of 71 natural source materials, giving taxonomic name and synonyms, plant parts used, important chemical constituents, preparation, toxicological data, classification, and limits.

**Methods of Analysis for Functional Foods and Nutraceuticals, 2nd ed.**

Edited by W. Jeffrey Hurst  
*CRC Press: Boca Raton, FL, 2008; 546 pp*

Presents chapters covering methods for analysis of phytoestrogens, fatty acids, flavonoids, phenolics derived from wine and olive oil byproducts, anthocyanins, carotenoids, chlorophylls, water-soluble vitamins, amino acids, and carbohydrates in functional foods.