Chemical and Functional Properties of Food Components Second Edition

This book is a comprehensive resource on the chemical and functional properties of food components, providing an overview of the composition, properties, and effects of various food components on health and food quality. It covers topics such as proteins, lipids, carbohydrates, vitamins, minerals, and flavor compounds, and explains how these components interact with each other and with food processing to affect the final product.

The book is divided into several sections, each covering a specific group of food components. Each section includes chapters on the properties, composition, and functionality of the components, as well as their effects on food quality and safety. The book also includes case studies and examples of how these components are used in food production.

The book is written by a team of international experts from various fields, including food chemistry, nutrition, and biology, ensuring that the information is up-to-date and accurate. It is an essential reference for researchers, students, and practitioners in the food industry.

One of the unique features of this book is that it provides a systematic approach to understanding the chemical and functional properties of food components. It covers the current state of knowledge in the field, as well as emerging topics and areas of research.

Overall, Chemical and Functional Properties of Food Components Second Edition is an invaluable resource for anyone interested in the chemistry and functionality of food components, and it will be a valuable addition to any food science library.
Food antioxidants are of primary importance for the preservation of food quality during processing and storage. However, the status of food depends on a balance of antioxidants and prooxidants occurring in food. Food Oxidants and Antioxidants: Chemical, Biological, and Functional Properties provides a single-volume reference on the interactions of food components with each other and with food processing conditions as well as the effects of food processing conditions on the chemical and biological properties of food components. It also examines how oxidation and antioxidants affect the nutrition and health-promoting features of food components. The text examines natural antioxidants in food, including lycopene, carotenoids, and vitamins E and C, and synthetic antioxidants in food, including ethoxyquin, BHA, BHT, and propyl gallate. It also examines the effects of naturally occurring prooxidants and antioxidants on the functionality and bioavailability of food components and the interactions of food components with the physical, chemical, and biological properties of food components. The book discusses the effects of food processing conditions on the biological and chemical properties of food components and the interactions of food components with the physical, chemical, and biological properties of food components. It also examines the effects of food processing conditions on the functionality and bioavailability of food components and the interactions of food components with the physical, chemical, and biological properties of food components. The book discusses the effects of food processing conditions on the biological and chemical properties of food components and the interactions of food components with the physical, chemical, and biological properties of food components.

Food Flavors: Chemical, Sensory, and Technological Properties explores the main aspects of food flavors and provides a starting point for further risk assessment, quality assurance and control, good manufacturing practices, food process systems design and control, and rapid methods of analysis and detection, as well as sensor technology, environmental control and safety. The book focuses on food chemistry and examines chemical and mechanical modifications to generate new properties, functions, and applications. Advances in Food Science and Technology: Chemical, Sensory, and Technological Properties explores the main aspects of food flavors and provides a starting point for further risk assessment, quality assurance and control, good manufacturing practices, food process systems design and control, and rapid methods of analysis and detection, as well as sensor technology, environmental control and safety. The book focuses on food chemistry and examines chemical and mechanical modifications to generate new properties, functions, and applications.

Food Flavors - Henny Jen - 2010-10-25

Food Flavors: Chemical, Sensory, and Technological Properties explores the main aspects of food flavors and provides a starting point for further study in this field. The book provides a comprehensive review of research in all areas of food chemistry/science and technology. It covers topics such as food safety objectives, food quality and safety, and food processing. It also provides a comprehensive review of research in all areas of food chemistry/science and technology. It covers topics such as food safety objectives, food quality and safety, and food processing. It also provides a comprehensive review of research in all areas of food chemistry/science and technology. It covers topics such as food safety objectives, food quality and safety, and food processing. It also provides a comprehensive review of research in all areas of food chemistry/science and technology. It covers topics such as food safety objectives, food quality and safety, and food processing.

Functional Properties of Bio-inspired Surfaces - Eduardo A. Ferret - 2005

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Chemistry is an applied reference which reviews the properties of food proteins and provides in-depth information on important plant and animal proteins consumed around the world. The book is grouped into three sections: (1) overview of food proteins, (2) plant proteins, and (3) animal proteins. Each chapter discusses world production, nutritional significance, and technological properties of food proteins as well as its food applications. The authors for each of the chapters are carefully selected experts in the field. This book will be a valuable reference tool for those who work on food proteins. It will also be an important text on applied food protein chemistry for upper-level students and graduate students of food science programs.

Carcinogenic and Anticarcinogenic Food Components - Wanda Bae-Dubowska - 2005-09-22

Dairy Processing and Quality Assurance, Second Edition describes the processing and manufacturing stages of milk and major dairy products, from the receipt of raw milk to the finished product. The book focuses on the chemistry and microbiology of milk and discusses the various processing and quality assurance techniques important in the dairy industry.

Chemical and Functional Properties of Food Components - Zeynep Ustunol - 2014-12-19

Food Carbohydrate Chemistry - Ronald E. Wrolstad - 2012-02-07

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Food Chemistry - Barry E. Nitecki - 2000-05-29

Food Chemistry is a comprehensive coverage of food chemistry and biochemistry. The book covers the basics of food chemistry, including the chemistry of food ingredients, the chemistry of food systems, and the chemistry of food processing. It also covers the chemical properties of food components, the functional properties of food components, and the health effects of food components.

Functional Properties of Food Components - Yeshajahu Pomeranz - 2012-12-06

The book is designed to be a reference book for food scientists and technologists who are interested in understanding the functional properties of food proteins.

Functional properties of food proteins are important in determining how food products behave during processing and storage. They are also important in determining the sensory properties of food products, such as texture, color, and flavor. The book covers the functional properties of food proteins from a practical perspective, with a focus on their applications in food processing and food technology.

Food Microbiology and Food Safety - Fan Zhang - 1992

A comprehensive coverage of food microbiology and food safety, this book provides an overview of the fields of food microbiology and food safety, including the role of microorganisms in food spoilage, foodborne diseases, and food processing. It also covers the principles of food preservation, the analysis of foodborne pathogens, and the control of foodborne diseases.

Food Processing and Quality Assurance - Barry E. Nitecki - 1988-09-27

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Food Quality and Nutritional Aspects of Cereal Products - Chiara Carelli - 2015-09-07

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Functional Properties of Food Proteins - Christopher C. Crapo - 2012-02-07

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Global wheat consumption in the 2016/2017 season is forecasted to reach a record high 736m tonnes, showing a growth of 25% in the last 15 years. This raises the question which outlets the wheat is going into, what the growth of these outlets is, which regions or countries have grown the most, and where do we see future potential? In this report, we look at the growth of wheat used for feed in the next years, and in the future, companies involved in the grain supply chain and feeding industry will need to be flexible enough to continue to meet this fast-changing demand for feed grains. For feed producers, this means they need to be able to access supplies of different grains from different origins to allow for the cheapest composition of their feed, while grain suppliers need to be able to continuously best engage with global trading opportunities to originate grains in various regions and move them to demand regions as cost-effectively as possible.

Global Wheat Production - Shah Fahad - 2018-08-16

The demand for feed grains has increased sharply in recent years, and the growth of wheat used for feed is expected to slow the growth of wheat used for feed in the next years, and in the future, companies involved in the grain supply chain and feeding industry will need to be flexible enough to continue to meet this fast-changing demand for feed grains. For feed producers, this means they need to be able to access supplies of different grains from different origins to allow for the cheapest composition of their feed, while grain suppliers need to be able to continuously best engage with global trading opportunities to originate grains in various regions and move them to demand regions as cost-effectively as possible.


Chitosan in the Preservation of Agricultural Commodities - Silvia Bautista-Balbin - 2016-01-20

Chitosan in the Preservation of Agricultural Commodities presents a cohesive overview of research topics regarding the production and characterization of chitosan, the development of coatings and films, its functional properties, and its potential for use in developing new crops of food. It includes the modes of action from a physiological, enzymatic, and molecular perspective, and evaluations of the activity of chitosan nanoparticles and microparticles in biological models. The first section deals with the chemical characteristics and functional properties of chitosan and new chitosan-based biocomposites intended for food applications, the second section describes the chemical characteristics and functional properties of chitosan and new chitosan-based biocomposites intended for food applications, and the third section explores enzymatic and gene expression induction by chitosan application on fruit and vegetables. The fourth section offers insight on the use of chitosan nanoparticles in biological models associated with food preservation and control of microorganisms. Analyzes chitosan chemical and functional properties.

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