Sensory evaluation methods are extensively used in the wine, beer and distilled spirits industries for product development and quality control, while consumer research methods also offer useful insights as the product is being developed. This book introduces sensory evaluation and consumer research methods and provides a detailed analysis of their applications to a variety of different alcoholic beverages. Chapters in part one look at the principles of sensory evaluation and how these can be applied to alcoholic beverages, covering topics such as shelf life evaluation and gas chromatography-olfactometry. Part two concentrates on fermented beverages such as beer and wine, while distilled products including brandies, whiskies and many others are discussed in part three. Finally, part four examines how consumer research methods can be employed in product development in the alcoholic beverage industry. With its distinguished editor and international team of contributors, Alcoholic beverages is an invaluable reference for those in the brewing, winemaking and distilling industries responsible for product development and quality control, as well as for consultants in sensory and consumer science and academic researchers in the field. Comprehensively analyses the application of sensory evaluation and consumer research methods in the alcoholic beverage industry Considers shelf life evaluation, product development and gas chromatography-olfactometry Chapters examine beer, wine, and distilled products, and the application of consumer research in their productionPreservatives for the Beverage Industry, Volume Fifteen, a new release in The Science of Beverages series, is a valuable resource that discusses preservatives and their impact in the beverage industry, including potential health impacts. The book takes a broad, multidisciplinary approach to explore both conventional and novel approaches of the types and uses of preservatives. The latest applications and techniques to reduce the use of non-natural or health-threatening preservation elements are also covered. This is a must-have reference for anyone who needs to increase their technical-scientific knowledge in this field. Includes information on the use of hurdle technology in the preservation of beverages Provides the latest research and impact of antimicrobial use in the beverages industry Presents the benefits and risks of preservatives to ensure safety in beverage productsAs consumer demand for traditional carbonated drinks falls, the market for beverages with perceived health-promoting properties is growing rapidly. Formulating a nutritional, nutraceutical or functional beverage with satisfactory sensory quality and shelf-life can be challenging. This important collection reviews the key ingredients, formulation and preservation approaches to help ensure successful beverage product development. The book includes chapters on the role of antioxidants in protective cultures and bacteriophages, and the use of probiotics and acidulants to improve shelf-life and safety. It also explores the uses and applications of arabic gum and cellulose for improved sensory quality, and looks at the uses of alcohol, ethanol and glycerol in functional beverage development. The science of beverages is a multi-disciplinary field, and this book brings together experts from sensory and consumer science, food science and food technology to review the development and safety implications of modern functional beverages. 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specific commodity that will provide food scientists with a one-stop, comprehensive reference on how to

Applications for Improving Food Colour is unique in its approach to the improvement of food colors. The

food products featuring maximising the functional benefits of plant foods, dietary fibre, functional dairy

and soy productsConsumers favour foods with fewer synthetic additives, but products must also be

Consumers favour foods with fewer synthetic additives, but products must also be

disease, diabetes, cancer, obesity and infectious diseases Examines the development of functional

fatty acids (PUFAs). With its distinguished editors and international team of expert contributors,

the nutritional and sensory quality and technological functionality of milkThe first edition of Functional

biopreservation, the use of a product s natural

products such as fruit juices, sports drinks, tea and coffee. Soy proteins are also covered. Chapters on

the role of beverages in the diet complete the volume. With its distinguished

beverage biopreservation is a fundamental reference for researchers and food industry professionals

and the market for these types of products has also developed. Thoroughly revised and

and microbial culture components Examines the use of protective cultures, bacteriocins and bacteriophages to improve food safety. Part II concentrates on the use of protective

Now that the use of protective cultures, bacteriocins and bacteriophages to control the carriage of pathogenic microorganisms in food

Recent years and the market for these types of products has also developed. Thoroughly revised and

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protection in the functional foods area. There has been a remarkable amount of research into health-promoting foods in

Nutritional and sensory quality and technological functionality of milk, a crucial ingredient in many healthful beverages. Chapters on

The first edition of Functional and speciality beverage technology is an essential collection for

Part three looks at nutrient fortification technology and methods to extend shelf-life are considered Focuses on methods to improve

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The editors and international team of expert contributors, Food and beverage stability and shelf life is a comprehensive guide to the importance of stability and shelf life in the food and beverage industry. This book provides a comprehensive overview of the factors that influence stability and shelf life, as well as methods for stability and shelf life assessment. It covers a wide range of products, including beer, soft drinks, fruit, bread, oils, confectionery products, milk and seafood. With its distinguished contributors, the book offers in-depth analysis of the effects of ingredients, processing and packaging on stability, among other factors. Part three reviews the stability and shelf life of a wide range of products, including microbiological spoilage and physical instability. Chapters in this section also investigate the chemical structures of active ingredients for the formulation of functional foods and nutraceuticals. Finally, chapters in part four explore applications of algae and algal components in foods, functional and speciality beverage technology. Offers analysis strategies for beverage quality evaluation. Presents updates on the latest techniques and applications, including extraction, biochemical isotope analysis, metabolomics, microfiltration, and encapsulation. Users will find this book to be an excellent resource for researchers with an interest in algae and those in the algaculture, food and nutraceutical industries. It is an invaluable resource for anyone in the beverages field who is interested in the commercialisation of products made from algae. Provides an overview of the major bioactive compounds in algae, considering both macroalgae (seaweeds) and microalgae. Discusses methods for the extraction of bioactives from algae Describes the use of algae and products derived from them in foods and nutraceuticals including the design of healthier foods and beverages containing whole algae, prebiotic properties of algae and algae-supplemented products, algal hydrocolloids for the production of food ingredients. There is also increasing interest in their exploitation as sources of additives to the direct addition of color formulations. Algae have a long history of use as foods and for the extraction of bioactives from algae. This makes the book extremely useable for industrialists working in a specific sector. Contains natural food colorants for one specific product category per chapter rather than one pigment class per consumer demand and worldwide legislation regarding natural food colorants. Discusses the use of vegetables in pigments, and stable natural solutions for blue colorings. Presents recent advances in the health benefits of natural pigments, the use of novel fruits and vegetables for foods and nutraceuticals reviews key topics in these areas, encompassing both macroalgae and minor compounds. Part two highlights biological properties of algae and algal components and includes chapters on the antioxidant properties of algal components, anticancer agents derived from algae, and minor compounds. Part three focuses on the extraction of compounds and fractions from algae and covers conventional and alternative technologies for the production of algal polysaccharides. Further chapters discuss enzymatic extraction, subcritical water extraction and supercritical CO2 extraction of bioactives. Finally, chapters in part four explore applications of algae and algal components in foods, functional and speciality beverage technology. Offers analysis strategies for beverage quality evaluation. Presents updates on the latest techniques and applications, including extraction, biochemical isotope analysis, metabolomics, microfiltration, and encapsulation. Users will find this book to be an excellent resource for researchers with an interest in algae and those in the algaculture, food and nutraceutical industries. It is an invaluable resource for anyone in the beverages field who is interested in the commercialisation of products made from algae. Provides an overview of the major bioactive compounds in algae, considering both macroalgae (seaweeds) and microalgae. After a chapter introducing the concept of algae as a source of biologically active ingredients for the formulation of functional foods and nutraceuticals, part one explores the structure and occurrence of the major algal components. Chapters discuss the chemical structures of active ingredients for the formulation of functional foods and nutraceuticals. The first section of the book looks at the legal framework which underpin natural food colorings, also investigating the consumer expectations of food colorants and the role of the colorant in improving the color of a particular food product. The second section of the book focuses on specific industrial applications of natural colorants with chapters covering the use of natural colorants in aqueous food products, cereal-based foods, and confectionery products.
some of the most common enrichments used in the industry, including those with biomedical and vitamins, oils and other natural ingredients to improve beverages are included. The book addresses and unnatural ingredients and explains their impact on consumer health and nutrition. Sweeteners, Beverages, Volume Fourteen in The Science of Beverages series, takes a multidisciplinary approach in contentment, pleasure, and delight with a product. Value-Added Ingredients and Enrichment of tailored for the food and beverage sector and which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product. Includes an extensive overview of an adapted satisfaction scale that has been studies demonstrating how these practices can be used in industry to better enhance customer's satisfaction. Focuses on the inter-relationship between packaging and the product experience, specifically in the design, shape, on-pack sensory messages, expectations, and consumer satisfaction with the product. This is an important development as it provides insights about products that can be captured consumer responses to products that go beyond traditional sensory and liking measures. These approaches include assessing consumers' emotional responses, obtaining temporal measures research illustrated consumers' dissatisfaction or delight with a product can be evoked when there is dissonance between the packaging and the product experience. The book includes an extensive overview of an adapted satisfaction scale that has been tailored for the food and beverage sector and presents the expectancy disconfirmation model of satisfaction, which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product. Additionally, it presents the expectancy disconfirmation model of satisfaction, which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product.
Woodhead Publishing Series in Food Science Technology and Nutrition

Nanotechnology in the Agri-Food Industry, Volume Five, discusses the fabrication, merits, demerits, and product development. Deals with the selection of raw materials and ingredients.

Nutrient Delivery: standard work in its field. Covers management issues such as HACCP, quality control, process control.

Biscuits, Crackers and Cookies as the standard reference work in the industry. Widely regarded as the team of expert contributors. This new edition consolidates the position of Manley’s Technology of Biscuits, Crackers and Cookies is widely regarded as the standard work in its field. Part one now includes a new chapter on sustainability. The assistance of an author from a major machinery manufacturer. With its distinguished editor and position of biscuits in nutrition. Finally, part four has been comprehensively reviewed and revised with biscuits now illustrate chapters in part three, which also includes a newly-composed chapter on the are entirely new chapters on fats and oils and packaging materials. Photographs of the major types of biscuits now some 25% longer than the previous edition. Part one now includes a new chapter on sustainability. The range and types of information about the EU Food Information Regulation, as well as the US market. Reviews issues academically. Offers timely advice for those concerned with the legal framework for food labelling, with regulations and enforcement. Brings together contributions from industry, trade bodies, government and academia. This Brief presents an extensive analysis on the evolution of food technologies and consumer issues. The EU Food Information Regulation will come into force in December 2014 and the book is designed to provide timely and useful information to manufacturers in this area, as well as on a global scale. Part one covers the different types of information that can, or until now, have been difficult to obtain. The book surveys the information on wheat flour has been extensively revised to reflect recent developments and there in the biscuit industry and the discussion of process and efficiency control is more detailed.

Part two deals with the selection of raw materials and ingredients. The range and types of raw materials and ingredients is considered, along with the selection of packaging materials and equipment. The book also covers the selection of raw materials for specific applications and the selection of packaging materials for specific products. The book also includes a chapter on the selection of raw materials and ingredients for specific applications and the selection of packaging materials for specific products. The book also includes a chapter on the selection of raw materials for specific applications and the selection of packaging materials for specific products. The book also includes a chapter on the selection of raw materials for specific applications and the selection of packaging materials for specific products.

Part three covers management issues such as HACCP, quality control, process control and product development. Part two deals with the selection of raw materials and ingredients. The range and types of raw materials and ingredients is considered, along with the selection of packaging materials and equipment. The book also covers the selection of raw materials for specific applications and the selection of packaging materials for specific products. The book also includes a chapter on the selection of raw materials for specific applications and the selection of packaging materials for specific products. The book also includes a chapter on the selection of raw materials for specific applications and the selection of packaging materials for specific products. The book also includes a chapter on the selection of raw materials for specific applications and the selection of packaging materials for specific products.
While products such as bananas, pineapples, kiwifruit and citrus have long been available to consumers in temperate zones, new fruits such as lychee, longan, carambola, and mangosteen are now also entering the market. Confirmation of the health benefits of tropical and subtropical fruit may appeal to consumers seeking novel and unique flavors. As a result, the demand for these fruits continues to grow, and researchers are focusing on their preparation and preservation. This increase in research has led to a better understanding of the nutritional value and bioavailability of these fruits, which can be attributed to their bioactive compounds.

The bioactive compounds present in these fruits can be classified into two main categories: the hydrophilic and the lipophilic. Hydrophilic bioactives, such as flavonoids and polyphenols, are generally less stable during processing and storage, while lipophilic bioactives, such as carotenoids and tocopherols, are more stable. The stability of these bioactives is important as it affects their bioavailability and health benefits.

To improve the bioavailability of these bioactives, researchers have explored the use of nanodelivery systems. Nanodelivery systems are colloidal nanosystems with diameters ranging from 10 nm to 1000 nm. They have the potential to improve bioavailability, enable controlled release, and enhance stability of food bioactives. Among these, the lipid-based delivery systems such as nanoemulsions, solid lipid nanoparticles, nanoliposomes and micelles are widely used. These systems can also improve the permeability, stability and bioavailability of the lipophilic compounds thereby enhancing their potential applications in functional foods.

Recent years, the delivery of micronutrients at nanoscale has been widely studied as these systems have the potential to improve bioavailability, enable controlled release and enhance stability of food bioactives. In the food industry, nanodelivery systems can be used for oral delivery and functional food development. On the other hand, the hydrophilic bioactives are delivered through protein, polysaccharide or biopolymer based colloidal nanosystems such as hydrogels, nanogels and polymer nanoparticles. The major concern other than solubility is the intestinal permeability of the micronutrients. For instance, the delivery system for compounds with poor intestinal permeability, such as omega-3 fatty acids, needs to be carefully designed using suitable lipids and surfactants.

In this chapter, we will focus on the bioactives present in tropical and subtropical fruits, their bioavailability, and the potential use of nanodelivery systems for their delivery. We will also discuss the challenges associated with the delivery of these bioactives and the future directions of research in this area.
Handbook of Food and Beverage Fermentation Technology examines a wide range of starter cultures and manufacturing procedures for popular alcoholic beverages and bakery, dairy, meat, cereal, soy, and vegetable food products. An international panel of experts from government, industry, and academia provide an in-depth review of fermentation history and quality assurance practices, and manufacturing guidelines. The text focuses on the impact on the development of other fermented foods. With approximately 2,300 references for further fermentations using recent examples that depict the main species used, their characteristics, and their quality of the final food product, flavor formation, and new advances in starter cultures for dairy microorganisms, the text is a comprehensive overview.

While many books focus solely on recent developments, this reference book highlights these developments and provides detailed information on recent applications of genetic engineering in the fermentation of food systems. Over the past decade, new applications of genetic engineering in the fermentation of food systems have received a great deal of coverage in scientific literature. With its distinguished editors and international team of expert contributors, Encapsulation technologies and delivery systems for food ingredients and nutraceuticals provides a comprehensive guide to current and emerging techniques. The text covers encapsulation, protection, release and enhanced bioavailability of food ingredients and nutraceutical delivery systems, discussing challenges in system development and analysis of nutraceutical delivery systems, while part two discusses processing technologies for encapsulation and delivery systems.

The production of encapsulation and delivery systems is an authoritative guide for both industry and academic researchers interested in encapsulation and controlled release systems. Provides a comprehensive guide to current and emerging techniques in encapsulation technologies and delivery systems and review characterization and applications of delivery encapsulation and delivery systems. Later sections investigate physicochemical approaches to the production of encapsulation and delivery systems, while part two discusses processing technologies for encapsulation and delivery systems. Part one provides an overview of key requirements for food ingredient and postharvest handling and processing of tropical and subtropical fruits and for academics and professionals involved in the postharvest handling and processing of tropical and subtropical fruits, along with the other volumes in the collection, Volume 2 is an essential reference both for professionals involved in the postharvest handling and processing of tropical and subtropical fruits and for academics and postharvest is essential and there have been many recent advances in this area. Many tropical fruits are processed further into purees, juices and other value-added products, so quality optimization of postharvest losses, and are also transported long distances for sale. Therefore, maximizing their quality also promote consumption further. Tropical and subtropical fruits are particularly vulnerable to interaction with the human gastrointestinal tract. Processing technologies for encapsulation and delivery systems are the focus of part two. Spray drying, cooling and chilling are reviewed alongside coextrusion, fluid bed microencapsulation, microencapsulation methods based on biopolymer phase separation, and gelation phenomena in aqueous media. Part three goes on to investigate encapsulation and delivery systems for food ingredients and nutraceuticals, discussing challenges in system development and analysis of nutraceutical delivery systems, including the use of micelles and microemulsions, polymeric amphiphiles, liposomes, colloidal emulsions, organogels and hydrogels. Finally, part four reviews characterization and applications of delivery systems, providing a comprehensive overview.
and sensory qualities, and the functionality of milk. The book concludes with a review of advances in extend shelf-life. The coverage includes dairy based beverages, methods to improve their nutritional sweeteners, and then explores formulation issues such as fortification technology and methods to specialty beverages. It begins with coverage of essential ingredients such as stabilizers and collection reviews the key ingredients, formulation technology, and health effects of functional and claims, GMO-free) and sustainability Includes dairy, nondairy, cereal and fruit beveragesThis important potential of probiotic beverages in preventing disease Covers controversial regulatory matters (labeling probiotic beverages of different geographical locations, market status and scope Discusses the drinks to the consumer, the full product lifecycle of a probiotic beverage is discussed. Describes quality and safety. From practical issues of developing probiotic beverages, to the marketing of these beverage technology, sections cover starter cultures, regulatory challenges, genetic engineering, advancements in probiotic beverages and consumer health relationships, with a focus on large-scale indigenous and commercially produced probiotic beverages and related products. Examining current throughout different regions of the world. The book includes in-depth knowledge by local authors on establishment and varied management aspects of open innovation partnerships and networks and drink industry and reviews the role of partners and networks in open innovation Explores the food industry Provides a comprehensive overview of the changing nature of innovation in the food and innovation in the food and beverage industry is a unique guide to the implementation and management framework are the focus of part four, with discussion of the development, application and psychology open innovation partnerships and networks. Finally, open-innovation tools, processes and managerial discussed, before part three goes on to explore the establishment and varied management aspects of with consumers, the effectiveness of cluster organizations and the importance of network knowledge all acknowledging trends and considering the implications and impact of open innovation. Part two then investigations, Open innovation in the food and beverage industry investigates the challenges and opportunities afforded by the incorporation of open innovation into the food industry. Part one provides extracts in soft drinks and milk-based food ingredientsFood and beverage companies are increasingly Examines natural ingredients in savoury food products, baked goods and alcoholic drinks, natural plant and flavour enhancers, and considers natural antioxidants and antimicrobials as food ingredients legislative issues relating to natural food additives and ingredients, the range of natural food additives and ingredients, and their applications in different product sectors Explores what the term  natural means in the context of food additives, ingredients and flavourings is an invaluable reference tool for all those involved in the ingredients. With is distinguished editors and expert team of international contributors, Natural food and alcoholic drinks are examined, as are natural plant extracts in soft drinks and milk-based food specific applications in different products. Natural ingredients in savoury food products, baked goods natural aroma chemicals and flavourings from biotechnology and green chemistry. Part two considers additional exploitation of external ideas and paths to market. Drawing on a range of important case studies, Open innovation in the food and beverage industry investigates the challenges and opportunities afforded by the incorporation of open innovation into the food industry.
moisture loss, gain and migration, crystallization and emulsion breakdown. Contributions in the measurement. Part two reviews quality deterioration associated with physical changes, such as chemical reactions which can negatively affect food quality, such as oxidative rancidity, and their impacts on the potential health benefits of bioactive compounds in dietary lipids, with final sections discussing the functional role in many foods. The book covers the functionality and nutritional benefits of dietary fat in food, discussing the chemistry of edible fats, manufacturing issues, including the replacement of trans fatty acids in food, fat reformulation for calorie reduction, thermal stability of fats, and more. Considers manufacturing issues of dietary fat in foods. Addresses issues affecting the consumer relationship with fat, such as regulation, marketing, and health claims. For a food product to be a success in the marketplace it must be stable throughout its shelf-life. Quality deterioration due to chemical changes and alterations in condition due to physical instability are not always recognised, yet can be just as problematic as microbial spoilage.

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processes. Describes the latest advances in separation, extraction and concentration techniques and important reference source for professionals concerned with the development and optimisation of these extraction and concentration processes in the food, beverage and nutraceutical industries. Areas covered include dairy and egg processing, oilseed extraction, and separation technologies and their applications in various sectors of the food, beverage and nutraceutical industries. Includes a solid review of safety and hygiene for the development of new products Presents...
properties and benefits of developing nonalcoholic beverages, their production particularities, trends based on consumer demand for natural drinks that have health benefits. The book discusses the associated properties, physiochemical characteristics, and methods to help researchers and students understand the world. The book focuses on the research and development of innovative products and new growing methods of analysis, and part three focuses on specific food product applications and future trends.

Part one covers the development and safety of food color additives. Part two covers properties and available, their properties and applications, as well as regulatory, sensory and analytical issues. Part three examines the natural and synthetic colour additives available for foods and beverages, looking at their methods of analysis, and part three focuses on specific food product applications and future trends.

Reviews the natural and synthetic colour additives available for foods and beverages, looking at their methods of analysis, and part three focuses on specific food product applications and future trends. Establishing product sensory specifications and combining methods of analysis, and part three focuses on specific food product applications and future trends.


Reviews the natural and synthetic colour additives available for foods and beverages, looking at their methods of analysis, and part three focuses on specific food product applications and future trends.
learn about utilized nonalcoholic beverages. Presents a broad scope of topics and process solutions from experts in the beverages industry. Covers the latest technologies and microbiological methods that enhance the health benefits of beverages. Includes emerging trends in nonalcoholic beverages and offers a variety of safety and quality techniques for adding value to products.