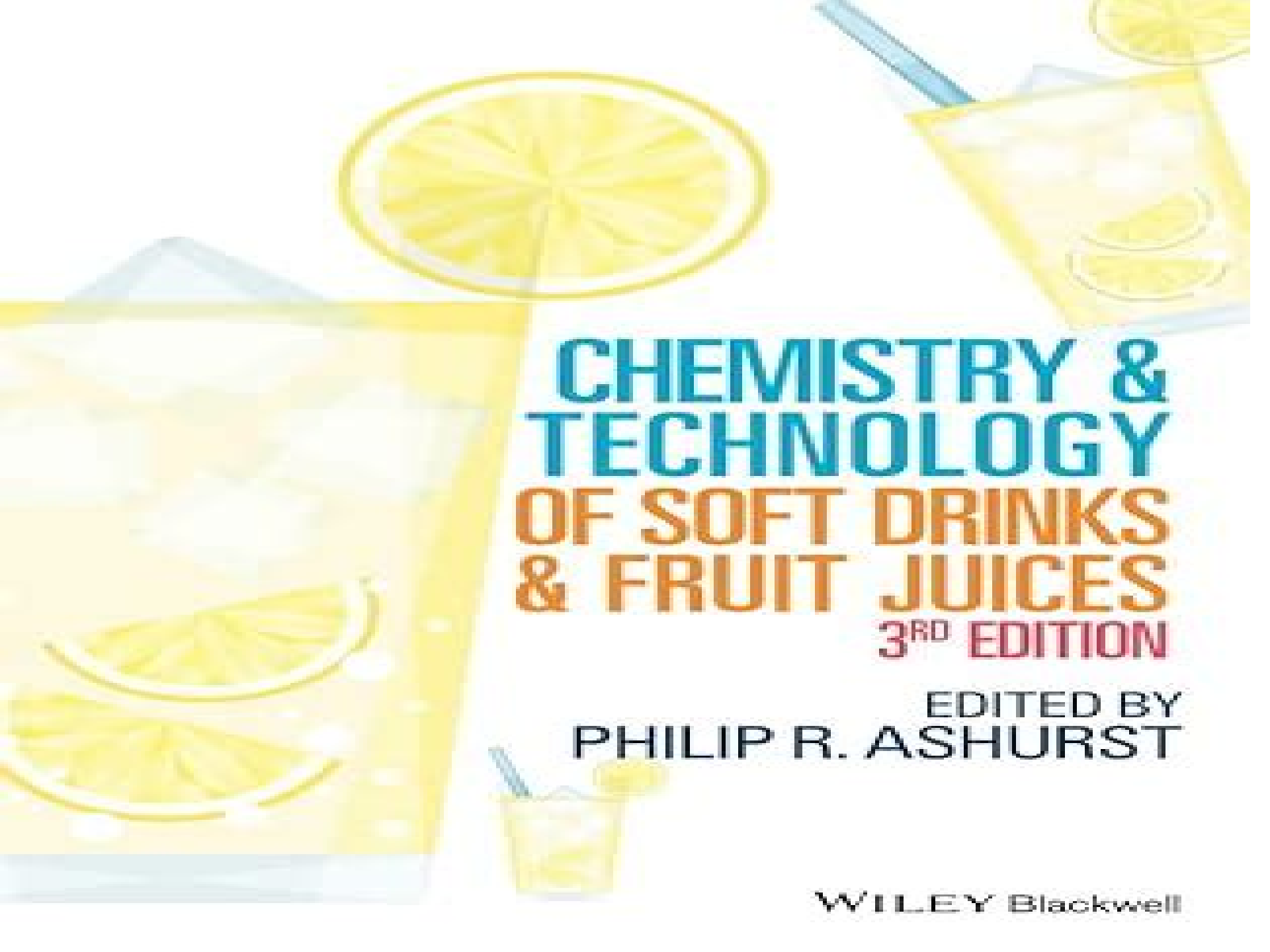


The background of the cover features a stylized illustration of soft drinks. On the left is a large glass of iced lemonade with a lemon slice. On the right is a tall glass of iced lemonade with a straw and a lemon slice. Above the large glass is a single lemon slice. Below the title is a small glass of iced lemonade with a straw and a lemon slice.

# **CHEMISTRY & TECHNOLOGY OF SOFT DRINKS & FRUIT JUICES**

**3<sup>RD</sup> EDITION**

EDITED BY  
**PHILIP R. ASHURST**

**WILEY** Blackwell

# Chemistry And Technology Of Soft Drinks And Fruit Juices

**Philip Ashurst, Robert Hargitt, Fiona  
Palmer**



## **Chemistry And Technology Of Soft Drinks And Fruit Juices:**

Chemistry and Technology of Soft Drinks and Fruit Juices Philip R. Ashurst, 2008-04-15 Soft drinks and fruit juices are produced in almost every country in the world and their availability is remarkable From the largest cities to some of the remotest villages soft drinks are available in a variety of flavours and packaging The market for these products continues to show a remarkable potential for growth The variety of products and packaging types continues to expand and among the more significant developments in recent years has been the increase in diet drinks of very high quality many of which are based on spring or natural mineral water This book provides an overview of the chemistry and technology of soft drinks and fruit juices The original edition has been completely revised and extended with new chapters on Trends in Beverage Markets Fruit and Juice Processing Carbohydrate and Intense Sweeteners Non Carbonated Beverages Carbonated Beverages and Functional Drinks containing Herbal Extracts It is directed at graduates in food science chemistry or microbiology entering production quality control new product development or marketing in the beverage industry or in companies supplying ingredients or packaging materials to the beverage industry *Chemistry and Technology of Soft Drinks and Fruit Juices* Philip R. Ashurst, 2016-01-25 Soft drinks and fruit juices are produced in almost every country in the world and their availability is remarkable From the largest cities to some of the remotest villages soft drinks are available in a variety of flavours and packaging Over the last decade soft drinks and fruit juices have been the subject of criticism by the health community and there is considerable pressure on beverage manufacturers to reduce or even remove the sugar content of these products *Chemistry and Technology of Soft Drinks and Fruit Juices* Third Edition provides an overview of the chemistry and technology of soft drinks and fruit juices covering ingredients processing microbiology traceability and packaging as well as global market trends This fully revised edition now includes chapters on topics that have become prominent in the industry since publication of the previous edition namely water use and treatment and microbiology technologies The book is directed at graduates in food science chemistry or microbiology entering production quality control new product development or marketing in the beverage industry or in companies supplying ingredients or packaging materials to the beverage industry **Microorganisms in Foods 8** International Commission on Microbiological Specifications for Foods (ICMSF), 2011-06-02 *Microorganisms in Foods 8 Use of Data for Assessing Process Control and Product Acceptance* is written by the International Commission on Microbiological Specifications for Foods with assistance from a limited number of consultants The purpose of this book is to provide guidance on appropriate testing of food processing environments processing lines and finished product to enhance the safety and microbiological quality of the food supply *Microorganisms in Foods 8* consists of two parts Part I Principles of Using Data in Microbial Control builds on the principles of *Microorganisms in Foods 7 Microbiological Testing in Food Safety Management* 2002 which illustrates how HACCP and Good Hygienic Practices GHP provide greater assurance of safety than microbiological testing but also identifies circumstances where

microbiological testing may play a useful role Part II Specific Applications to Commodities provides practical examples of criteria and other tests and is an updated and expanded version of Part II of *Microorganisms in Foods 2 Sampling for Microbiological Analysis Principles and Specific Applications* 2nd ed 1986 Part II also builds on the 2nd edition of *Microorganisms in Foods 6 Microbial Ecology of Food Commodities* 2005 by identifying appropriate tests to evaluate the effectiveness of controls

Soft Drink and Fruit Juice Problems Solved Philip Ashurst, Robert Hargitt, Fiona Palmer, 2017-07-06 *Soft Drinks and Fruit Juice Problems Solved* Second Edition follows the innovative question and answer format of the first edition presenting a quick problem solving reference Questions like Does the use of a preservative in a product mean that it does not need to be pasteurized How much deviation from ingredient specification is needed to cause a noticeable alteration in product quality What kinds of organisms will grow in bottled waters When is it necessary to obtain expert assistance in the event of a contamination incident are all answered in detail The book's new introduction covers basic questions about soft drinks their ingredients and packaging Additional new chapters expand on microbiological problems shelf life and storage and fruit juices and nectars as well as product nutrition and health claims Final chapters offer soft drink and fruit juice data sources Written by authors with extensive industrial experience the book is an essential reference and problem solving manual for professionals and trainees in the beverage industry Uses a detailed and clear question and answer format that is ideal for quick reference Contains additional new up to date problems and solutions Contains an expanded introduction and new sections on microbiological problems shelf life and storage fruit juices and nectars product claims nutrition and health claims and soft drink and fruit juice data sources Presents a broad scope of topics and process solutions from the experts in the beverages industry

*Handbook of Fruits and Fruit Processing* Y. H. Hui, József Barta, M. Pilar Cano, Todd W. Gusek, Jiwan S. Sidhu, Nirmal K. Sinha, 2008-02-28 The processing of fruits continues to undergo rapid change In the *Handbook of Fruits and Fruit Processing* Dr Y H Hui and his editorial team have assembled over forty respected academicians and industry professionals to create an indispensable resource on the scientific principles and technological methods for processing fruits of all types The book describes the processing of fruits from four perspectives a scientific basis manufacturing and engineering principles production techniques and processing of individual fruits A scientific knowledge of the horticulture biology chemistry and nutrition of fruits forms the foundation A presentation of technological and engineering principles involved in processing fruits is a prelude to their commercial production As examples the manufacture of several categories of fruit products is discussed The final part of the book discusses individual fruits covering their harvest to a finished product in a retail market As a professional reference book replete with the latest research or as a practical textbook filled with example after example of commodity applications the *Handbook of Fruits and Fruit Processing* is the current comprehensive yet compact resource ideal for the fruit industry

**Carbonated Soft Drinks** Dr. David Steen, Philip R. Ashurst, 2008-04-15 The market for carbonated beverages has grown dramatically over recent years

in most countries and this growth has required changes in the way factories are run. Like other food products, soft drinks are required to be produced under stringent hygiene conditions. Filling technology has progressed rapidly to meet the needs of manufacturers and consumers alike. Packaging choices have changed and there have been improvements in closure design. This book provides an overview of carbonated soft drinks production in the early part of the twenty-first century, presenting the latest information on carbonation and filling methods. There are also chapters on bottle design, can making, general packaging considerations, production and distribution. A final chapter deals with quality assurance and environmental and legislative issues. Detailed references provide opportunity for further reading in more specialised areas. The book is aimed at graduates in food science, chemistry, microbiology and engineering who are considering a career in the soft drinks industry as well as technical staff already employed within the industry and associated suppliers.

*Food and Beverage Packaging Technology* Richard Coles, Mark J. Kirwan, 2011-04-25. Now in a fully revised and updated second edition, this volume provides a contemporary overview of food processing packaging technologies. It acquaints the reader with food preservation processes, shelf life and logistical considerations as well as packaging materials, machines and processes necessary for a wide range of packaging presentations. The new edition addresses environmental and sustainability concerns and also examines applications of emerging technologies such as RFID and nanotechnology. It is directed at packaging technologists, those involved in the design and development of packaging, users of packaging in food companies and those who specify or purchase packaging.

**Key Features:** An up-to-date and comprehensive handbook on the most important sector of packaging technology. Links methods of food preservation to the packaging requirements of the common types of food and the available food packages. Covers all the key packaging materials: glass, plastics and paperboard. Fully revised second edition now covers sustainability, nanotechnology and RFID.

Cereals and Pulses Liangli L. Yu, Rong Tsao, Fereidoon Shahidi, 2012-05-01. Cereal and pulse crops are staple foods that provide essential nutrients to many populations of the world. Traditionally, whole grains were consumed, but most current foods are derived from refined fractions of cereal and pulse crops. Consumption of processed or refined products may reduce the health benefits of food. In wheat-based processed foods, for example, the removed 40% of the grain, mainly the bran and the germ, contains the majority of the health-beneficial components. These components, particularly non-essential phytochemicals such as carotenoids, polyphenols, phytosterols, stanols and dietary fibers, have been shown to reduce the risk of major chronic diseases of humans, such as cancer, cardiovascular diseases and Parkinson's disease. Such bioactives are therefore good candidates for ingredients of nutraceuticals and functional foods. There are many factors that can affect the bioactive content of cereal and pulse-based food ingredients, including genetics, growing and storage conditions, post-harvest treatments, food formulation and processing. All of these factors ultimately affect human health and wellness. Bioavailability is also important for these compounds for exerting their protective roles.

*Cereals and Pulses: Nutraceutical Properties and Health Benefits* provides a summary of

current research findings related to phytochemical composition and properties of cereal and pulse crops The nutraceutical properties of each major cereal and pulse are discussed Coverage of cereals and pulse crops includes barley oats rice rye corn adlay wheat buckwheat psyllium sorghum millet common beans field peas faba beans chickpea lentil and soybeans Chapters for each crop discuss methods to improve crop utilization nutraceutical components and properties bioactive compositions antioxidant properties beneficial health effects disease prevention activities and areas for future research Also included are two chapters that examine the beneficial health properties of dietary fibers and antioxidants Edited and written by an international team of respected researchers this book is a reference guide for scientists working in food ingredients food product research and development functional foods and nutraceuticals crop breeding and genetics human nutrition post harvest treatment and processing of cereal grains and pulses It will enable them to effect value added food innovation for health promotion and disease risk reduction

*Manufacturing Yogurt and Fermented Milks* Ramesh C. Chandan, Arun Kilara, 2013-01-10 Melding the hands on experience of producing yogurt and fermented milks over four decades with the latest in scientific research in the dairy industry editor Chandan and his associate editors have assembled experts worldwide to write *Manufacturing Yogurt and Fermented Milks* 2nd Edition This one of a kind resource gives a complete description of the manufacturing stages of yogurt and fermented milks from the receipt of raw materials to the packaging of the products Information is conveniently grouped under four categories Basic background History and consumption trends milk composition characteristics dairy processing principles regulatory requirements laboratory analysis starter cultures packaging and more Yogurt manufacture Fruit preparations and flavoring materials ingredients processing principles manufacture of various yogurt types plant cleaning and sanitizing quality assurance and sensory analysis Manufacture of fermented milks Procedure packaging and other details for more than ten different types of products Health benefits Functional foods probiotics disease prevention and the health attributes of yogurt and fermented milks All manufacturing processes are supported by sound scientific technological and engineering principles

Decontamination of Fresh and Minimally Processed Produce Vicente M. Gómez-López, 2012-02-13 Attempts to provide safer and higher quality fresh and minimally processed produce have given rise to a wide variety of decontamination methods each of which have been extensively researched in recent years *Decontamination of Fresh and Minimally Processed Produce* is the first book to provide a systematic view of the different types of decontaminants for fresh and minimally processed produce By describing the different effects microbiological sensory nutritional and toxicological of decontamination treatments a team of internationally respected authors reveals not only the impact of decontaminants on food safety but also on microbial spoilage vegetable physiology sensory quality nutritional and phytochemical content and shelf life Regulatory and toxicological issues are also addressed The book first examines how produce becomes contaminated the surface characteristics of produce related to bacterial attachment biofilm formation and resistance and sublethal damage and its implications for

decontamination After reviewing how produce is washed and minimally processed the various decontamination methods are then explored in depth in terms of definition generation devices microbial inactivation mechanisms and effects on food safety Decontaminants covered include chlorine electrolyzed oxidizing water chlorine dioxide ozone hydrogen peroxide peroxyacetic acid essential oils and edible films and coatings Other decontamination methods addressed are biological strategies bacteriophages protective cultures bacteriocins and quorum sensing and physical methods mild heat continuous UV light ionizing radiation and various combinations of these methods through hurdle technology The book concludes with descriptions of post decontamination methods related to storage such as modified atmosphere packaging the cold chain and modeling tools for predicting microbial growth and inactivation The many methods and effects of decontamination are detailed enabling industry professionals to understand the available state of the art methods and select the most suitable approach for their purposes The book serves as a compendium of information for food researchers and students of pre and postharvest technology food microbiology and food technology in general The structure of the book allows easy comparisons among methods and searching information by microorganism produce and quality traits

This book delves into Chemistry And Technology Of Soft Drinks And Fruit Juices. Chemistry And Technology Of Soft Drinks And Fruit Juices is an essential topic that must be grasped by everyone, from students and scholars to the general public. The book will furnish comprehensive and in-depth insights into Chemistry And Technology Of Soft Drinks And Fruit Juices, encompassing both the fundamentals and more intricate discussions.

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    - Chapter 3: Chemistry And Technology Of Soft Drinks And Fruit Juices in Everyday Life
    - Chapter 4: Chemistry And Technology Of Soft Drinks And Fruit Juices in Specific Contexts
    - Chapter 5: Conclusion
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  3. In chapter 2, this book will delve into the foundational concepts of Chemistry And Technology Of Soft Drinks And Fruit Juices. The second chapter will elucidate the essential principles that need to be understood to grasp Chemistry And Technology Of Soft Drinks And Fruit Juices in its entirety.
  4. In chapter 3, this book will examine the practical applications of Chemistry And Technology Of Soft Drinks And Fruit Juices in daily life. The third chapter will showcase real-world examples of how Chemistry And Technology Of Soft Drinks And Fruit Juices can be effectively utilized in everyday scenarios.
  5. In chapter 4, the author will scrutinize the relevance of Chemistry And Technology Of Soft Drinks And Fruit Juices in specific contexts. This chapter will explore how Chemistry And Technology Of Soft Drinks And Fruit Juices is applied in specialized fields, such as education, business, and technology.
  6. In chapter 5, the author will draw a conclusion about Chemistry And Technology Of Soft Drinks And Fruit Juices. This chapter will summarize the key points that have been discussed throughout the book.
- This book is crafted in an easy-to-understand language and is complemented by engaging illustrations. This book is highly recommended for anyone seeking to gain a comprehensive understanding of Chemistry And Technology Of Soft Drinks And Fruit Juices.

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