

# Handbook Of Fruits And Fruit Processing

Fruit Processing Handbook of Fruits and Fruit Processing Processing Fruits Commercial Fruit  
Processing Processing Fruits Processing Fruits Advances in Fruit Processing Technologies Handbook of  
Fruits and Fruit Processing Handbook of Vegetables and Vegetable Processing Handbook of Fruits and  
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Manufacturing Handbook of Fruits and Fruit Processing Tropical Fruit Processing Advances in Fruit  
Processing Technologies Fruit Preservation Quality Assurance in Tropical Fruit Processing Fruit  
Processing: Nutrition, Products, and Quality Management Commercial Fruit Processing D. Arthey Y.  
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(Ed.). HUI Nirmal K. Sinha Y. H. Hui Guus de Klein Ahmed Askar Jorge E. Lozano Y. H. Hui Jethro  
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fruit and fruit products in all their many varieties and variations are major world commodities and part of the economic life blood of many countries particularly in the developing world the perception of the healthy nature of fruit is a major reason for its increased consumption in the developed world and many consumers today find a wider selection of fruit varieties available at all times of the year than ever before this volume however is not so much concerned with fresh fruit as those principal areas of processing to which it may be subjected fruit processing arose as a means of utilising a short lived product and preserving its essential nutritional qualities as far as possible a chapter on the nutritional aspects of fruit is included in this work to reflect the importance of this topic to most consumers after a general introduction the chapter on fruit storage is the only contribution which deals with a process from which fruit emerges in essentially the same physical condition beyond that the book sets out to cover most of the major areas in which fruit may be processed into forms which bear varying semblances to the original raw material

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

the new edition of this highly acclaimed reference provides comprehensive and current information on a wide variety of fruits and processes revised and updated by an international team of contributors the second edition includes the latest advances in processing technology scientific research and regulatory requirements expanded coverage includes fresh cut fruits non thermal methods of fruit processing and more information on the effects of variety and maturity on processed product quality it presents a wide range of information on fruits and fruit products and covers traditional as well as the newest technologies

use of fewer additives containing sodium spices artificial colors and flavors and energy continued use of fruits in cereals salads cakes pies and other combinations as a source of minerals vitamins fiber and natural flavors and colors an important recent innovation is low moisture processing in which fruit with no added sugar preservative or carrier is converted into convenient dehydrated forms development of this technology has been stimulated by high transportation rates improvements in technology and revolutionary new packages in addition to raisins prunes and dehydrated apples pears peaches and apricots bananas are available in flakes slices and granules pineapple and other tropical fruits also are available in new forms another low moisture product is apple fiber solids consisting of cell wall material cellulose hemicellulose lignin and pectin and apple sugars low moisture forms of other fruits are becoming more common commercial fruit processing is a companion volume to commercial vegetable processing also edited by b s luh and j g woodroof both are being updated and revised simultaneously grateful acknowledgments and thanks go to contributors who wrote in their own area of expertise on commercial fruit processing credit also goes to more than a dozen commercial companies and individuals who supplied photographs charts tables and data from commercial operations thanks also to ann autry who typed corrected and edited the manuscript and to naomi c woodroof my wife for assisting in research

this publication presents information about the latest developments in fruit processing in volume 1 starting with the postharvest handling of fruits we discuss all food processing technologies that are applied to fruit preservation also included in this volume are other essential features of fruit processing operations such as the food additives used microbiology quality assurance packaging grades and standards of fruits and waste management

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one of the main concerns of the food industry is the need for high quality fresh fruits and fruit products with good sensory quality long shelf life and high nutritional value to meet these demands new processing technologies are under investigation and development advances in fruit processing technologies incorporates fundamentals in food processing as well as the advances made in recent years to improve final product quality with contributions from a panel of international researchers who present a blend of classical and emerging technologies the book explores ozone ultrasound irradiation pulsed electric field vacuum frying and high pressure processing ultraviolet and membrane processing enzymatic maceration freeze concentration and refrigeration the effect of processing on sensory characteristics and nutritional value new trends in modified atmosphere packaging the use of fruit juices as a vehicle for probiotic microorganisms prebiotic oligosaccharides as an alternative for dairy products incorporating a series of case studies on the application of various technologies the book reviews their advantages limitations successes and failures the contributors also examine the

implications of food processing technologies on waste production energy use and resource requirements this comprehensive survey of methods for optimizing fruit quality is an ideal resource for those in the fruit and vegetable industry looking for innovations that can improve efficiency reduce waste and cut costs

vegetables are an important article of commerce both in developed and developing economies many studies point to importance of vegetables in our diet handbook of vegetables and vegetable processing serves as a reference handbook on vegetables and vegetable processing containing the latest developments and advances in this fast growing field the book can be considered as a companion to y h hui s popular handbook of fruits and fruit processing 2006 handbook of vegetables and vegetable processing is contemporary in scope with in depth coverage of new interdisciplinary developments and practices in the field of vegetables emphasizing processing preservation packaging and nutrition and food safety coverage includes chapters on the biology horticultural biochemistry microbiology nutrient and bioactive properties of vegetables and their significant commercialization by the food industry worldwide full chapters are devoted to major vegetables describing aspects ranging from chemistry to processing and preservation world renowned editors and authors have contributed to this essential handbook on vegetables and their production technology storage processing packaging safety and commercial product development special features coverage includes biology and classification physiology biochemistry flavor and sensory properties microbial safety and haccp principles nutrient and bioactive properties in depth descriptions of key processes including minimal processing freezing pasteurization and aseptic processing fermentation drying packaging and application of new technologies entire chapters devoted to important aspects of over 20 major commercial vegetables including avocado table olives and textured vegetable proteins unparalleled expertise on important topics from more than 50 respected authors

covers the preparation of juice syrups paste jams and jellies

tropical and subtropical countries have become well aware of the fact that they must make better use of their fruits in spite of the favourable climatic conditions for the production of varieties of delicious fruits in such countries continuously high temperatures shorten the shelf life of most fruits and fruit products a tropical climate provides ideal conditions for rapid growth of spoilage microorganisms and for chemical reactions most of such reactions in fruits and fruit products are deteriorative in nature causing high respiration rates texture softening and spoilage of fruit this causes loss of colour flavour and vitamins and browning of fruit products even though a fruit product has been rendered microbiologically stable these chemical reactions continue to occur in storage and they occur much more rapidly in a tropical climate the processing of fruits and soft drinks is a predominate food industry in tropical and subtropical countries some of the large companies in such industries are partly foreign owned they seem to be efficiently operated with adequate capital good management and technological competence all of which are usually imported from the parent company however most of small and medium companies are locally owned and are deficient in technology and management ability the products are generally fair it is rare to find a trained quality assurance manager in these companies processing of good fruit products especially for export requires sound fruit processing lines as well as good management that achieves internationally accepted standards of quality

emphasizing the products rather than the processes this is the first book to encompass quality changes during processing and storage of fruit in the food industry it presents the influence on a fruit product's quality in relation to the different processing methods from freezing to high temperature techniques it also discusses the origin of deterioration kinetics of negative reactions and methods for inhibition and control of the same

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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

tropical fruit processing focuses on the improved food preservations methods of tropical fruits for lesser developed and developed countries this book covers four tropical fruits namely guava mango papaya and passion fruit these fruits have the greatest growth potential based on the knowledge and technology acquired in their cultivation processing and preservation each chapter in this book discusses the botany cultivars horticulture harvesting handling storage composition packing and processing of the fruit a variety of processed products from these fruits such as jellies jams preserves purees sauces and juices are also covered furthermore this book describes various food preservation methods including dehydration concentration and canning this book is an invaluable resource for scientists technologists manufacturers students and others concerned with cultivating processing manufacturing research development or marketing of foods

fruits and fruit based products are in most cases associated with very good sensory characteristics health well being perishability relatively easy to mix with food products of diverse origin amenable to be processed by conventional and novel technologies given the multiplicity of aspects whenever fruit preservation is considered the editors took the challenge of covering in a thorough comprehensive

manner most aspects dealing with this topic to accomplish these goals the editors invited well known colleagues with expertise in specific disciplines associated with fruit preservation to contribute chapters to this book eighteen chapters were assembled in a sequence that would facilitate like building blocks to have at the same time a birds eye view and an in depth coverage of traditional and novel technologies to preserve fruits even though processing took center stage in this book ample space was dedicated to other relevant and timely topics on fruit preservation such as safety consumer perception sensory and health aspects features traditional and novel technologies to process fruits microwaves ohmic heating uv c light irradiation high pressure pulsed electric fields ultrasound vacuum impregnation membranes ozone hurdle technology topics associated with fruit preservation safety nutrition and health consumer perception sensory minimal processing packaging unit operations for fruit processing cooling and freezing dehydration frying

the processing of fruits and their juices is an important internationally branch of the food industry many fruit processing plants are situated in the tropics or subtropics or they process fruit or fruit products from these areas tropical and subtropical climates provide ideal conditions for the rapid growth of microorganisms and for chemical reactions most of these reactions are detrimental to the overall quality of fruits and fruit products this laboratory manual presents both the classical laborious methods of chemical physical microbiological and organoleptical methods of analysis and the modern sophisticated but rapid procedures of testing and analysing special attention is given to economical rapid methods which are readily available and easy to use in tropical climates

consumption of food products based on or containing fruit is increasing as consumers in the developed world seek a diet which they perceive to be healthy at the same time developing countries are increasing their volumes of value added fruit processing in order to earn important foreign currency this book provides a concise thorough and authoritative coverage of the technology of fruit processing from a worldwide perspective detailed coverage of the use of fruit by products environmental issues



quality assurance and hygiene reflect the importance of these topics new chapters cover biochemistry and implications for processing packaging and quality management systems and haccp food technologists production managers and technical staff in the fruit processing industry and its equipment suppliers will find the book an important information source while those in academic and research establishments will use it as a key reference

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