Fatty Acids Profile Of Edible Oils And Fats In India

This book acknowledges the importance of fats and oils and surveys today's state-of-the-art technology. To pursue food technology without knowing the raw material would mean working in a vacuum. This book describes the raw materials predominantly employed and the spectrum of processes used today. It is the updated and revised English version of Nahrungsfette und Ole, originally printed in German. It contains 283 tables, 647+ figures, and over 850 references. "If you can afford only one book on oils and fats, their composition, processing and use, then this should probably be the one!" Presents details on the composition, chemistry, and processes of the major fats and oils used today Includes hundreds of illustrations and tables, making the concepts easier to read and grasp Acknowledges the importance of fats and oils offers details on relevant technologies

Lipids and Edible Oils: Properties, Processing and Applications covers the most relevant topics of lipids and edible oils, especially their properties, processing and applications. Over the last years, researchers have investigated lipid bioavailability, authentication, stability and oxidation during processing and storage, hence the development of food and non-food applications of lipids and edible oils has attracted great interest. The book explores lipid oxidation in foods, the application of lipids as nano-carriers of food bioactive compounds, and their bioavailability, metabolism and nutritional genomics. Regarding edible oils, the book thoroughly explores their triacylglycerols content, biodiesel and energy production from vegetable oils, refining and lifecycle assessment. Written by a team of interdisciplinary experts that research lipids and edible oils, the book is intended for food scientists, technologists, engineers and chemists working in the whole food science field. Thoroughly explores the technological properties of lipids and edible oils Includes food processing by-products and microalgae as a source of lipids and edible oils Reviews novelties in edible oil products and processing, including refining techniques, biorefinery and value creation processing waste

Olives and Olive Oil in Health and Disease Prevention, Second Edition expands the last releases content and coverage, including new sections on materials in packaging, the Mediterranean diet, metabolic syndrome, diabetic health, generational effects, epigenetics, glycemic control, ketogenic diet, antioxidant effects, the use of olive oil in protection against skin cancer, oleuropein and ERK1/2 MAP-Kinase, oleocanthal and estrogen receptors, and oleocanthal and neurological effects. The book is a valuable resource for food and health researchers, nutritionists, dieticians, pharmacologists, public health scientists, epidemiologists, food technologists, agronomists, analytical chemists, biochemists, biologists, physicians, biotechnologists and students. Continues the tradition of exploring olives and olive oil from general aspects down to a detailed level of important micro-and micronutrients Explains how olive oil compares to other oils Details the many implications for human health and disease, including metabolic health, cardiovascular health and effects on tissue and body systems

Future Foods: Global Trends, Opportunities, and Sustainability Challenges highlights trends and sustainability challenges along the entire agri-food supply chain. Using an interdisciplinary approach, this book addresses innovations, technological developments, state-of-the-art based research, value chain analysis, and a summary of future sustainability challenges. The book is written for food scientists, researchers, engineers, producers, and policy makers and will be a welcomed reference. Provides practical solutions for overcoming recurring sustainability challenges along the entire agri-food supply chain Highlights potential industrial opportunities and supports circular economy concepts Proposes novel concepts to address various sustainability challenges that can affect and have an impact on the future generations

The Certification of the Fatty Acid Profile and the Cholesterol Mass Fraction of Two Edible Oil and Fat Materials

Free Fatty Profiles

Future Foods

The Columbus Concept

The Chemistry of Oils and Fats

Moving from Evolutionary to Revolutionary

"Edible oils are made up almost entirely of fatty acids. There are around 13 fatty acids which are important in olive oil. The fatty acid profile simply refers to the proportions of all of those fatty acids in the oil mixture." - para. 1.

Biomass to Renewable Energy Processes, Second Edition, explains the theories of biological processes, biomass materials and logistics, and conversion technologies for bioenergy products such as biogas, ethanol, butanol, biodiesel, and synthetic gases. The book discusses anaerobic digestion of waste materials for biogas and hydrogen production, bioethanol and biobutanol production from starch and cellulose, and biodiesel production from plant oils. It addresses thermal processes, including gasification and pyrolysis of agricultural residues and woody biomass. The text also covers pretreatment technologies, enzymatic reactions, fermentation, and microbiological metabolisms and pathways.

In this completely rewritten Second Edition of Trans Fatty Acids in Human Nutrition authors who are recognised international authorities in their field have addressed the major areas of trans fatty acids (TFA) research such as consumption, analysis, biochemistry, synthesis and natural TFA biosynthesis, health effects, food formulation, and also regulation and consumer perception. Each chapter contains the latest references and major advances and breakthroughs in a specific area of trans fatty acids research. Furthermore, the book also includes a discussion of a major issue - the health effects of the natural trans isomers, comparing their effects to those observed for TFA produced during hydrogenation. The availability of so much information in a single volume will help to clarify the major effects of TFA in human nutrition that have been discovered over the last two decades. This book guides the next generation of scientists to the important opportunities for making further progress in this challenging field of research. The First Edition of Trans Fatty Acids in Human Nutrition carried out a very similar task for the state of our knowledge in the late 1990s but the rapid expansion and progress in the subject meant that it had to be completely re-written and expanded from the original nine to the present fifteen chapters of the Second Edition.

An investigation of an electrochemical process for hydrogenating edible oils at low temperature and pressure was conducted. This process was able to increase the oleic acid (a monounsaturated fatty acid) content and reduce trans fatty acids in two kinds of oils: soybean oil and vegetable oil. In this process, a Pd/Al2O3 catalyst provided active sites for the hydrogenation reaction between the edible oils and the formate ion. The formate ion was the hydrogen donor in the reaction and could be regenerated within the process at the cathode. Compared with the commercial method, the trans fatty acid formation was reduced because of the low reaction temperatures. The optimal reaction conditions for the electrochemical process used in this study were found. Finally, a mathematical model was developed to describe the kinetics of the hydrogenation process and to predict the fatty acid profile obtained.

AOCS/SFA Edible Oils Manual, Second Edition

Soya-maize Oil Blend CRM 162; Beef-pork Fat Blend CRM 163 : Final Report

Emerging Trends in Research and Their Applications

Soya-Maize Oil Blend Crm No 162, Beef-Pig Fat Blend Crm

Olives and Olive Oil in Health and Disease Prevention

Quality of Fresh and Processed Foods

Microalgae could play an important role in the achievement of sustainability goals related to the generation of renewable energy and greenhouse gas (GHG) emissions. These photosynthetic microorganisms are able to capture CO2 and, therefore, can be used to produce biofuels such as ethanol, methane and green diesel. Other factors, such as their high growth rate, ability to use wastewater as a culture medium and the ability to grow on non-arable land makes them a potentially economical source of biofuel production on a large scale. This monograph introduces the reader to the basic and applied science of microalgal biofuel production. Chapters in the volume give information about bioethanol and biogas production from microalgal sources, the fermentation process, optimization of culture parameters and industrial applications of biomass projects. The book is a useful reference for biotechnology and environmental science graduates and professionals interested in biofuel production.

Oils and fats are almost ubiquitous in food processing, whether naturally occurring in foods or added as ingredients that bring functional benefits. Whilst levels of fat intake must be controlled in order to avoid obesity and other health problems, it remains the fact that fats (along with proteins and carbohydrates) are one of the three macronutrients and therefore an essential part of a healthy diet. The ability to process oils and fats to make them acceptable as part of our food supplies is a key component in our overall knowledge of them. Without this ability, the food that we consume would be totally different, and much of the flexibility available to us as a result of the application of processing techniques would be lost. Obviously we need to know how to process fatty oils, but we also need to know how best to use them once they have been processed. This second edition of Edible Oil Processing presents a valuable overview of the technology and applications behind the subject. It covers the latest technologies which address new environmental and nutritional requirements as well as the current state of world edible oil markets. This book is intended for food scientists and technologists who use oils and fats in food formulations, as well as chemists and technologists working in edible oils and fats processing.

This book provides practical information on obtaining and using a wide variety of plant based reagents for different sectors, addressing the needs and challenges in a single resource. The chapters complement each other seamlessly and present contributions from reputed international researchers and renowned professionals from industry, covering the latest efforts in the field. The book serves as the starting point for future collaborations in the new area “ Plant Based Green Chemistry ” between research, industry, and education, covering large ecologic and economic applications: perfume, cosmetic, pharmaceutical, food ingredients, nutraceuticals, biofuels, or fine chemicals industries. This book is aimed at professionals from industries, academicians engaged in plant based green chemistry, researchers and graduate level students, but will also be useful to food technologists and students and researchers involved in natural products chemistry.

The three major macronutrients are proteins, carbohydrates, andlipids (oils and fats). This book is devoted to lipids, which arean important part of life for all of us. What are these materialsin molecular terms? Where do they come from? What happens to thembetween the harvesting of crops and the appearance of the oils andfats in different products in the supermarket? How does natureproduce these molecules and can we act on nature to modify thematerials to increase their beneficial properties? How importantare the minor products present in the fats that we consume? Sinceoils and fats vary, how can we analyse them? What are theirphysical, chemical and nutritional properties? How do the fats thatwe consume affect our health and well-being in both quantitativeand qualitative terms? What are their major food and non-fooduses? This book provides a broad source of reference on oils and fatschemistry for graduates entering the food and oleochemicalindustries, postgraduate researchers and nutritionists. It offers apoint of entry to the detailed literature.

Wild-type Food in Health Promotion and Disease Prevention

Handbook of Olive Oil: Analysis and Properties

The First Outstanding 50 Years of “ Universit à Politecnica delle Marche ”

Fatty Acids

Implications for Reducing Chronic Disease Risk

The Certification of the Fatty Acid Profile and the Cholesterol Mass Fraction of Two Edible Oil and Fat Materials. Soya-maize Oilblend CRM 162. Beef-pork Fat Blend CRM 163

For A Better Understanding Of The Composition And The State Of Combination Of The Fatty Substances Including Oils, Fats And Fatty Foods, Here Is A Practical Guide That Describes A Variety Of Methods For Their Examination And Discusses The Other Necessary Technical Details, Making Use Of Plenteous Diagrams And Illustrations. The Work Is Based On Author S Long Experience As A Technical Chemist And Also Draws From The Researches Carried Out By Other Established Scientists And Technologists. There Are Special Chapters, Particularly Useful For The Manufacturers, On Topics: Industrial Production Of Vegetables Oils And Fats: Hydrogenation Of Oils; And Rancidity, Preservatives And Colouring Matters. Tables Of Analytical Data, Reference To Relevant Literature And A Comprehensive Index, Further Enhance The Value Of This Handbook. Contents Chapter 1: General Introduction; Object Of Analysis Of-Oils And Fats, Fatty Foods, By Products, Standardisation Of Apparatus And Reagents; Chapter Ii: Preliminary Examination; Sampling Of Bulk Material, Preparation Of Sample For Analysis-Fat Of Oil, Oleginous Materials, Extraction And Estimation Of The Oil Or Fat-In Oleginous Seeds, Oil Cakes And Fibrous Materials Generally, In Crude Oils And Acid Oils, In Soap Stock, Examination Of The Total Fatty Matter From Soap Stocks And Acid Oils, Determination Of Moisture-In Oleaginous Seeds, Oil Cakes And Fibrous Materials Generally, In Oils And Acid Oils, Determination Of Impurities In Oils-Mineral Matter (Ash), Organic Dirt, Sea Water, Detection And Determination Of Metallic And Mineral Impurities-Copper, Lead And Zinc, Lime, Magnesia, Soda And Potash, Iron, Nickel, Sulphur, Arsenic, Phosphorus, Detection And Determination Of Hydrocyanic Acid, Chapter 3: General Analytical Methods; Physical Tests- Melting Point, Solidifying Point And Titre Test, Optical Activity, Refractive Index And Dispersion, Viscosity, Colour, Specific Gravity, Microscopical Examination For Beef, Lard And Hydrogenated Fate, Valenta Test, Chemical Test- Saponification Value, Unsaponifiable Matter, Phytosteryl Acetate Test-Special Treatment Of The Unsaponifiable Matter Of Lard And Other Fats-The Separation Of Cholesterol And Phytosterol, Acid Value, Iodine Value, Acetyl Value-True Acetyl Value, Soluble And Insoluble Fatty Acids, Insoluble Bromides, Quantitative Procedure, Lead-Salt-Ether For The Separation And Determination Of Liquid Fatty Acids, Including Determination Of Their Iodine Values, Tortelli And Fortini S Modification As Applied To The Detection Of Rape Oil In Mixtures, Magnesium Acetate Method Weight, Separation Of The Fatty Acid Esters By Fractional Distillation, Estimation Of Stearic Acid By Hehner S Method, Detection And Determination Of Arachis Oil, Bellier S Test, Evers Test, Bjorklund S Cocoa Butter Test, Colour Tests For Oils, Halphen S Test For Cotton-Seed Oil And Cotton-Seed Stearine , Baudouin S Test For Sesame Oil, Becchi S Test, Sulphuric Acid Test For Liver Oils, Rosin, Glycerol, Methods Of Crude Glycerine Analysis Recommended By The International Committees, Sampling, Analysis, Acetin Process For Glycerol Determination, Reagents Required, The Method; Chapter 4: Interpretation Of Analytical Methods For Oils And Fats And Of The Analyses Of Typical Samples; Interpretation Of Physical Tests- Melting-Point, Solidifying Point And Titre Test, Optical Activity, Refractive Index, Viscosity, Colour Readings, Specific Gravity, Microscopical Examination For Beef Fat, Lard And Hydrogenated Fats, Valenta Test, Interpretation Of Chemical Tests- Saponification Value, Unsaponifiabel Matter, Phytosteryl Acetate Test, Acid Value, Iodine Value, Acetyl Value, Soluble And Insoluble Fatty Acids, Reichert-Meissl-Polenske-Kirschner Values, Ave Lallemant Values, Tortelli And Fortini;S Modification Of The Lead-Salt-Ether Method, The Magnesium Acetate Method Of Resolution, The Separation Of Acids Of Low Molecular Weight, Separation Of The Fatty Acid Esters By Fractional Distillation, Resolution Of Mixtures Of Fatty Acids, Insoluble Bromide Determination, Lead-Salt-Ether Determination, Estimation Of Stearic Acid, Detection And Determination Of Arachis Oil, Bjorklund Cocoa Butter Test, Colour Reactions, Halphen S Reaction, Baudouin S Reaction, Becchi S Test, Sulphuric Acid Test, Three Typical Cases And Twelve Examples- A Sample Of Oil Guaranteed Pure, An Unknown Oil Or Fat, But Known Not To Be A Mixture, A Mixture Of Edible Fats, Introduction To The Examples-Olive Oil Marked Guaranteed Pure , Cocoa-Butter Marked Guaranteed Pure , A Lard Substitute, A Sample Of A Delivery Of Coconut Oil, Oil Extracted From Biscuits, Oil From Oil Cake, A Sample Of Oleo Oil, A Margarine Fat, An Adulterated Ghee, A Baking Fat, Kinds Of Oils And Fats Commonly Employed In Various Manufactures; Chapter 5: Industrial Production Of Vegetable Oils And Fats; Manufacturing Methods, Crude Oils-Production Of Oil, Preparation For Grinding, Grinding And Production Of Oil By-Mechanical Pressure, Extraction By Solvents, Refining Of Oil, Neutralisaiton, Bleaching, Deodorisation, By-Products Of Neutralisation; Chapter 6: Butter And Margarine; General Methods Of Examination, Butter Fat, Margarine Fat, Fats Used In Margarine Manufacture, Ghee And Ghee Substitutes; Chapter 7: Animal Fats, Fish And Marine Animal Oils; Animal Fats-Beef Fat, Lard, Lard Substitutes, Fish And Marine Animal Oils; Chapter 8: Vegetable Oils And Fats; Botanical Arrangement Of The Fruits And Seeds; Monocotyledons, Dicotyledons, Coniferae; Chapter 9: Hydrogenation Of Oils; General, Batch Processes, Continuous Process, Control Of Composition Of Product, Analysis And Charateristics Of Hydrogenated Oils, Detection Of Hydrogenated Oils, Properties And Uses; Chapter 10: Rancidity, Preservatives And Colouring Matters; Rancidity, Tests For Rancidity, Preservatives, Detection And Determination Of-Boron Compounds, Fluorides, Benzoates And Salicylates, B-Naphthol, Sulphites, Colouring Matters, Detection Of Prohibited Dyes; Chapter 11: Cocoa, Chocolate And Milk Chocolate; Introductory, Analysis Of- Cocoa, Chocolate, Milk Chocolate; Chapter 12: Feeding Stuffs; General Nature Of Feeding Stuffs And Calculation Of Food Value, Analysis Of Feeding Stuffs-Official Methods, Additional Methods, Chapter 13: Milk; Analysis Of Milk, Preservatives: Pasteurisation, Cleanliness And Bacteriological Condition, Cream And Separated Milk, Condensed Milk; Chapter 14: The Nutritive Value Of The Edible Oils And Fats; Fat-Soluble Vitamins, Vitamin A, Antirachitic Vitamin D, Vitamin E.

This book is a single source of information on all aspects of soybean processing and utilization written by experts from around the globe. Written in an easy-to-read format, this title covers a wide range of topics including the physical and chemical characteristics of soybeans and soybean products; harvest and storage considerations; byproduct utilization; soy foods; and nutritional aspects of soybean oil and protein. Compares soybeans to other vegetable oils as a source of edible oil products Presents a wide range of topics including chemistry, production, food use, byproduct use, and nutritional aspects Offers practical information ideal for soybean oil plant managers

This book provides a comprehensive review of recent innovations in food science that are being used to tackle the challenges of food safety, nutritional security and sustainability. With a major focus on developing nations, like India, the book is divided into four main sections. The first section provides an overview of the food industry, while the second explores food safety in various segments, with an interes account of street food safety – an important, yet often neglected aspect for safety parameters. The third section, on nutritional security and sustainability, explores various ways of maximizing nutrition and optimizing waste management in the food industry. The book closes with a section on emerging technologies and innovations, which introduces readers to some of the latest technologies in the food indus including advances in food processing, packaging, nanotechnology, etc. The topics have been divided into 25 different chapters, which offer a diverse blend of perspectives on innovations in the developing world. Ideally suited for students and researchers in the food sciences, the book is also an interesting read for industry experts in Food Science and Technology.

Diet and Health examines the many complex issues concerning diet and its role in increasing or decreasing the risk of chronic disease. It proposes dietary recommendations for reducing the risk of the major diseases and causes of death today: atherosclerotic cardiovascular diseases (including heart attack and stroke), cancer, high blood pressure, obesity, osteoporosis, diabetes mellitus, liver disease, and caries.

Structure and Health Implications

Fatty Acids in Foods and Their Health Implications

New Advances in Hydrogenation Processes

Edible Oil Structuring

Fats and Oils Handbook (Nahrungsfette und Öle)

Emerging Technologies in Food Science

An examination of certain types of fatty acids and their role in the aetiology of cancer, cardiovascular disease, immune and inflammatory diseases, renal disease, diabetes, neuromuscular disorders, liver disease, mental illness, visual dysfunction, and ageing. It reviews historic advances in biotechnology, including techniques for genetic manipulation of fatty acid composition. This revised and expanded second edition contains 11 new chapters.

The book describes the significant multidisciplinary research findings at the Università Politecnica delle Marche and the expected future advances. It addresses some of the most dramatic challenges posed by today’s fast-growing, global society and the changes it has caused. It also discusses solutions to improve the wellbeing of human beings. The book covers the main research achievements in the various disciplines of the life sciences, and includes chapters that highlight mechanisms relevant to all aspects of human diseases, the molecular, cellular, and functional basis of therapy, and its translation into the management of people’s health needs. It also describes research on traditional and innovative foods to enhance quality, safety and functionality, and to develop bioactive/nutraceutical compounds. Further chapters address conservation and management of various environments, from the forests to the oceans, describing the studies on countermeasures against climate changes and terrestrial/aquatic pollutants, and on terrestrial/marine biodiversity, ecosystems and landscapes, erosion of genetic biodiversity, innovative aquaculture feed, sustainable crop production and management of forests. Lastly, the book reports the findings of research work on different classes of biomolecules, and on the molecular basis of antibiotic resistances and their diffusion.

This book presents a cutting-edge, in-depth investigation into new methods of health promotion. It is one of the first books to focus on the role of omega-3 polyunsaturated fatty acids in unhealthy diets. The book also contains reviews of the economic benefits of novel health promotion and disease prevention methods. Leading experts present recent examples and clinical trials.

Edible oils, the cooking medium for a vast majority of snack foods, play a major role in determining taste, texture, and shelf life of snack foods, as well as influence their nutrient profile. The correct purchasing, testing, storage and processing of these oils are vitally important. The AOCS and the Snack Food Association have responded to this need by producing a comprehensive reference manual to describe the proper use and handling of edible oils. This updated second edition contains the latest information regarding the selection, composition, processing, storage, deterioration, cooking process, handling of equipment, and testing of edible oils.

Food Process Engineering

Practical Handbook of Soybean Processing and Utilization

History of Catta Iland Off Marblehead

Plant Based “Green Chemistry 2.0”

Lipids and Edible Oils

Trans Fatty Acids in Human Nutrition

Written by some of the world's leading goat meat scientists, and drawing from the most recent publications in the field, this book comprehensively covers the most important areas of goat meat production. Chapters discuss the role of genetics, breeding, reproduction, and nutrition in producing good quality, profitable goat meat. The mineral, amino acid and fatty acid composition of goat meat is also addressed, along with a discussion of its nutritive value, aimed at highlighting its health benefits over other red meats.

Leading academic and biomedical researchers comprehensively review the status of essential fatty acids (EFA) in nutrition, medicine, psychology, and pharmacology. Topics range from a discussion of EFA basic mechanisms to their effects on individual psychiatry and behavior, and include extensive coverage of pathology, DHA in CNS development, and phospholipid and fatty acid composition and metabolism. Comprehensive and forward-looking, Fatty Acids: Physiological and Behavioral Functions reviews and critically evaluates our current knowledge of EFA, setting the stage for oncoming wave of discovery about the biochemical and molecular functions of essential fatty acids, as well as their critical role in human physiology, immunology, and behavior.

Cold Pressed Oils: Green Technology, Bioactive Compounds, Functionality, and Applications creates a multidisciplinary forum of discussion on recent advances in chemistry and the functionality of bioactive phytochemicals in lipids found in cold pressed oils. Chapters explore different cold pressed oil, focusing on cold press extraction and processing, composition, physicochemical characteristics, organoleptic attributes, nutritional quality, oxidative stability, food applications, and functional and health-promoting traits. Edited by a team of experts, the book brings a diversity of developments in food science to scientists, chemists, nutritionists, and students in nutrition, lipids chemistry and technology, agricultural science, pharmaceuticals, cosmetics, nutraceuticals and many other fields. Thoroughly explores novel and functional applications of cold pressed oils Shows the difference between bioactive compounds in cold pressed oils and oils extracted with other traditional methods Elucidates the stability of cold pressed oils in comparison with oils extracted using other traditional methods

Driven both by real industrial needs and curiosity for fundamental research, edible oil structuring has emerged as a subject of growing interest with applications in real food systems. With contributions from leading research groups around the world, this book provides a comprehensive and concise overview of the field with special emphasis on the updates from the last 5 years. New insights into the mechanism of gelation in mono- and multicomponent gels are discussed for several categories of previously known structuring agents along with the potential food applications of some of these systems. In addition, use of alternative methods to explore structuring properties of hydrophilic biopolymers are presented with illustrative examples. Some new concepts such as bio-based synthesis of supergelators, foamed oleogels and use of innovative dispersion techniques give a broader picture of the current research in edible oil structuring. This book will be of interest to students, academics and scientists involved in the research of edible oil structuring. It will be an important reference as it provides current information on the state-of-the-art of the field.

Advances in Biofuels and Bioenergy

Cold Pressed Oils

Research Achievements in Life Sciences

Edible Oil Processing

Biomass to Renewable Energy Processes, Second Edition

Edible Oleogels

Low Trans Fatty Acid Containing Hydrogenated Edible Oils

Hydrogen is one of the abundant elements on earth majorly in the form of water (H2O) and mainly as hydrogen gas (H2). Catalytic hydrogenation is a key reaction that has versatile applications in different industries. The main objective of this book is to bring together various applications of hydrogenation through the perspective of leading researchers in the field. This book is intended to be used as a graduate-level text book or as a practical guide for industrial engineers.

Quality is a composite term encompassing many characteristics of foods. These include color, aroma, texture, general nutrition, shelf-life, stability, and possible presence of undesirable constituents. Obviously deterioration of quality may lead to changes in the attributes that characterize the food in its fresh or freshly processed state. In addition, quality enhancement of products may be carried out using appropriate processing techniques. Interaction of different components present with one another could have a profound effect on sensory quality of products. Meanwhile, presence of extraneous matter such as pesticides and debris may also contribute to a compromise in the quality of foods. In addition, processing often brings about changes in many attributes of food including its nutritional value. Thus, examination of process-induced changes in food products is important. In this book, a cursory account of quality attributes of fresh and processed foods is provided. The book is of interest to food scientists, nutritionists and biochemists in academia, government and industry.

Food Process Engineering: Emerging Trends in Research and Their Applications provides a global perspective of present-age frontiers in food process engineering research, innovation, and emerging trends. It provides an abundance of new information on a variety of issues and problems in food processing technology. Divided into five parts, the book presents new research on new trends and technologies in food processing, ultrasonic treatment of foods, foods for specific needs, food preservation, and food hazards and their controls.

The Certification of the Fatty Acid Profile of Two Edible Oil and Fat Materials

Low Trans Fatty Acid Containing Hydrogenated Edible Oils

Goat Meat Production and Quality

Current Industrial Reports

Fats and oils, production, consumption, and factory and warehouse stocks. M20K.

This new olive oil handbook provides a wealth of detail about the analysis and properties of olives and their oil. It covers technological aspects and biochemistry, a description of detailed techniques, and an analysis of olive oil from the standpoint of general methodology.

Prof. Ashok Patel of Guangdong Technion-Israel Institute of Technology (GTIIT), who served as a Topic Editor for this Research Topic, sadly passed away on Sunday 17th May 2020. We want to acknowledge the important role he played in developing this Research Topic.

The worldwide consumption of fossil fuel continues to increase at unsustainable levels, which will lead to progressive scarcity, if immediate and innovative measures are not taken for its sustainable use. This scarcity necessitates the development of renewable and sustainable alternatives for fossil fuels. A possible solution to today's energy challenges can be provided by biofuels. This book intends to provide the reader with a comprehensive overview of the current status and the future implications of biofuels. Diverse and aptly covered comprehensive information in this book will directly enhance both basic and applied research in biofuels and will particularly be useful for students, scientists, breeders, growers, ecologists, industrialists and policy makers. It will be a valuable reference point to improve biofuels in the areas of ecologically and economically sustainable bioenergy research.

Edible Oleogels, Structure and Health Implications, Second Edition presents a novel strategy on how to eliminate trans fats from our diets. Topics covered include how to avoid excessive amounts of saturated fat by structuring oil to make it behave like crystalline fat and how to develop trans fat free, low saturate, functional shortenings for the food industry. The major approach to form these materials is covered, helping manufacturers incorporate specific molecules (polymers, amphiphiles, waxes) into oil components. As such, this an ideal resource for those in product development and anyone interested in understanding the role of trans and saturated fats in health and nutrition. In an effort to provide alternatives to trans and saturated fats, scientists have been busy modifying the physical properties of oils to resemble those of fats. Many food products requiring a specific texture and rheology can be made with these novel oil-based materials without causing significant changes to final product quality. Hence, this book provides a valuable resource on new advancements. Presents emerging science on beta gels using natural triglycerides, ethylcellulose oleogels, and oleotropic liquid crystals Suggests a novel strategy to eliminate trans fats from our diets and avoid excessive amounts of saturated fat by structuring oil to make it behave like crystalline fat Reviews the structuring of edible oils to form new mesoscale and nanoscale structures, including nanofibers, mesophases, and functionalized crystals and crystalline particles Identifies evidence on how to develop trans fat free, low saturate, functional shortenings for the food industry

Diet and Health

Indian Food Composition Tables

Structured Edible Oil: Towards a New Generation of Fat Mimetics

Fundamentals and Applications

Microalgae as a Source of Bioenergy: Products, Processes and Economics

Physiological and Behavioral Functions