Iodine Value I V Palm Oil

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The oil palm is the world's most valuable oil crop. Its production has increased over the decades, reaching 56 million tons in 2013, and it gives the highest yields per hectare of all oil crops. Remarkably, oil palm has remained profitable through periods of low prices. Demand for palm oil is also expanding, with the edible demand now complemented by added demand from biodiesel producers. The Oil Palm is the definitive reference work on this important crop. This fifth edition features new topics - including the conversion of palm oil to biodiesel, and discussions about the impacts of palm oil production on the environment and effects of climate change ? alongside comprehensively revised chapters, with updated references throughout. The Oil Palm, Fifth Edition will be useful to researchers, plantation and mill managers who wish to understand the science underlying recommended practices. It is an indispensable reference for agriculture students and all those working in the oil palm industry worldwide.

Biodiesel production is a rapidly advancing field worldwide, with biodiesel fuel increasingly being used in compression ignition (diesel) engines. Biodiesel has

been extensively studied and utilised in developed countries, and it is increasingly being introduced in developing countries, especially in regions with high potential for sustainable biodiesel production. Initial sections systematically review feedstock resources and vegetable oil formulations, including the economics of vegetable oil conversion to diesel fuel, with additional coverage of emerging energy crops for biodiesel production. Further sections review the transesterification process, including chemical (catalysis) and biochemical (biocatalysis) processes, with extended coverage of industrial process technology and control methods, and standards for biodiesel fuel quality assurance. Final chapters cover the sustainability, performance and environmental issues of biodiesel production, as well as routes to improve glycerol by-product usage and the development of next-generation products. Biodiesel science and technology: From soil to oil provides a comprehensive reference to fuel engineers, researchers and academics on the technological developments involved in improving biodiesel quality and production capacity that are crucial to the future of the industry. Evaluates biodiesel as a renewable energy source and documents global biodiesel development The outlook for biodiesel science and technology is presented exploring the challenges faced by the global diesel industry Reviews feedstock resources and vegetable oil

formation including emerging crops and the agronomic potential of underexploited oil crops

With special reference to India.

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.
Breeding Oilseed Crops for Sustainable Production: Opportunities and Constraints presents key insights into accelerating the breeding of sustainable and superior varieties. The book explores the genetic engineering/biotechnology that has played a vital role in transforming economically important traits from distant/wild species to cultivated varieties, enhancing the quality and quantity of oil and seed yield production. Integrated nutrient management, efficient water management, and forecasting models for pests diseases outbreaks and integrated pest and pest management have also added new dimensions in breeding for sustainable production. With the rise in demand, the scientific community has responded positively by directing a greater amount of research towards sustainable production both for edible and industrial uses. Covering the latest information on various major world oil crops including rapeseed mustard, sunflower, groundnut, sesame, oilpalm, cotton, linseed/flax, castor and olive, this book brings the latest advances together in a single volume for researchers and advanced level students. Describes various methods and systems to achieve sustainable production in all major oilseed crops Addresses breeding, biology and utilization aspects simultaneously including those species whose information is not available elsewhere Includes information on modern biotechnological and

molecular techniques and production technologies Relevant for international government, industrial and academic programs in research and development
This book contains edited and revised papers from a conference on 'Science and Technology for Managing Plant Genetic Diversity in the 21st Century' held in Malaysia in June 2000, organised by the International Plant Genetic Resources Institute (IPGRI). It includes keynote papers and some 40 additional ones, covering ten themes.The major scientific challenges to developing a global vision for the next century are identified and key research objectives are also discussed.
This book is a comprehensive reference for energy crops from the plant perspective with expert authors for each crop. Of particular importance are the chapters covering the sustainability aspects (social, economic and environmental), including food security.
The increasing demand for environmentally friendly materials and the need for cheaper fibres points the search in the direction of natural products such as bark, leaves, scales or shells. The aim of this book is to provide a forum to review the recent advances in the area of plant and animal-based composites and identify possible trends for further developments.
Oils and fats have a major impact on the nutritional and sensory quality of many foods.

Food manufacturers must often modify lipid components or ingredients in food to achieve the right balance of physical, chemical and nutritional properties. Modifying lipids for use in foods reviews the range of lipids available, techniques for their modification and how they can be used in food products. Part one reviews vegetable, animal, marine and microbial sources of lipids and their structure. The second part of the book discusses the range of techniques for modifying lipids such as hydrogenation, fractionation and interesterification. Finally, part three considers the wide range of applications of modified lipids in such areas as dairy and bakery products, confectionary and frying oils. With its distinguished editor and international range of contributors, Modifying lipids for use in foods is a standard reference for dairy and other manufacturers using modified lipids. Reviews the range of lipids available Asseses techniques for modifying lipids such as fractionation and interesterification Considers the wide range of applications of modified lipids

This collection presents a broad selection of recent research on analytical chemistry, including methods of determination and analysis as applied to plants, pharmaceuticals, foods, proteins, and more. Analytical chemistry is the study of what chemicals are present and in what amount in natural and artificial materials. Because these understandings are fundamental in just about every chemical inquiry, analytical chemistry is used to obtain information, ensure safety, and solve problems in many different chemical areas, and is essential in both theoretical and applied chemistry.

Analytical chemistry is driven by new and improved instrumentation.

Healthful Lipids addresses critical and current regulatory issues and emerging technologies, as well as the efforts made toward the production of healthier lipids. This book examines the latest technological advancements and the emerging technologies in processing and analysis, health-related concerns, and strategies used in the production and appl

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.

While certain saturated and trans fats continue to face scrutiny as health hazards, new

evidence indicates that, in addition to supplying foods with flavor and texture, fats also provide us with dietary components that are absolutely critical to our well-being. The importance of essential fatty acids and fat-soluble vitamins and other minor components delivered by lipids is well known, as are the benefits and essentiality of long-chain omega-3 and omega-6 fatty acids. And now, with new research connecting lipids to heart health, mental health, and brain and retina development, the market has responded by providing health-conscious consumers with lipid foods, including spreads, breads, cereals, juices, and dairy products. Nutraceutical and Specialty Lipids and their Co-Products presents a thorough assessment of the current state of the chemistry, nutrition, and health aspects of specialty fats and oils. Fereidoon Shahidi, editor-in-chief of the Journal of Food Lipids and a past chair and co-founder of the Nutraceuticals and Functional Foods Division of the Institute of Food Technologists, brings together top researchers to address the potential application and delivery of lipids in functional foods. Sharing much of their own research, they offer an unparalleled view of the field that covers basic lipid chemistry, as well as the most progressive findings concerning the nutritional value of beneficial lipids. They include research on cereal grain, marine, fruit seed, and tree nut oils, as well as oilseed medicinals, fat replacers, and many other sources of lipids. They also consider stability issues and the latest tools being used for lipids purification. Covering the full range of these essential diet components, this cutting-edge volume serves to meet the needs of scientists and students in research

and product development, as well as health and nutrition specialists.
Surfactants Europa 3rd Edition provides easy access to current product information on surface active agents (surfactants) manufactured and sold in Europe. It contains valuable data on approximately 9,000 trade names from more than 80 suppliers, including chemical description and composition, general property, application and manufacturer information. The directory contains company and trade name indexes with page references, and provides a very useful listing of companies, with full contact details, including European divisions and agents. The products listed in the directory find applications in a wide variety of branches of the chemical manufacturing industry including detergent and cleaning products, agrochemicals, construction, cosmetics, food, oil, paint, paper, pharmaceuticals, plastics and textiles. The directory is edited by Dr Gordon Hollis, an established consultant in the surfactants field and author of four respected surfactants directories. Surfactants Europa 3rd Edition will be an essential reference directory for research and development personnel and laboratory staff in general. It will also be useful for technical departments and purchasing/sales departments, not only in the detergent industry but in many industries where surfactants are used.
Oils and fats are almost ubiquitous in food processing –whether naturally occurring in foods or added as ingredients forfunctional benefits and, despite the impression given by severalsources to the contrary, they remain an essential part of the humandiet.

However, it is increasingly apparent that both the quantityand the quality of the fat consumed are vital to achieving abalanced diet. Health concerns regarding high-fat diets continue tohave a high profile, and still represent a pressing issue for foodmanufacturers. This volume provides a concise and easy-to-use reference on thenature of oils and fats for those working in the food industry andfor those in the media seeking to advise the public on consumption.Written in a style that makes the concepts and informationcontained easily accessible, and using a minimum of chemicalstructures, the nature and composition of the constituents of oilsand fats are explained. The major sources of food lipids (vegetableand animal fats) are outlined, along with their physicalcharacteristics. The book also focuses on the current main concernsof the food industry regarding oils and fats use, including: thenutritional properties of fats and oils and their variouscomponents; links between chemical structure and physiologicalproperties; and the role of lipids in some of the more importantdisease conditions such as obesity, diabetes, coronary heartdisease and cancer. The final chapter is devoted to a descriptionof the most common food uses of oils and fats. The book will be of interest to food industry professionals,students or others who require a working knowledge of oils and fatsin the food industry.

Wild crop relatives are now playing a significant part in the elucidation and improvement of the genomes of their cultivated counterparts. This work includes comprehensive examinations of the status, origin, distribution, morphology,

cytology, genetic diversity and available genetic and genomic resources of numerous wild crop relatives, as well as of their evolution and phylogenetic relationship. Further topics include their role as model plants, genetic erosion and conservation efforts, and their domestication for the purposes of bioenergy, phytomedicines, nutraceuticals and phytoremediation. Wild Crop Relatives: Genomic and Breeding Resources comprises 10 volumes on Cereals, Millets and Grasses, Oilseeds, Legume Crops and Forages, Vegetables, Temperate Fruits, Tropical and Subtropical Fruits, Industrial Crops, Plantation and Ornamental Crops, and Forest Trees. It contains 125 chapters written by nearly 400 well-known authors from about 40 countries.

Ranging from studies on the structure and function of the skin to research on a wide array of cosmetic compounds, this Second Edition updates readers on the latest regulatory guidelines, new cosmetic ingredients, state-of-the-art safety assessment technologies, and anticipated trends in the market-keeping pace with rapid advancements in chemistry, physics, biology, cosmetology, and toxicology to stand alone as the foremost guide to the subject.

Emulsifiers, also known as surfactants, are often added to processed foods to improve stability, texture, or shelf life. These additives are regulated by national agencies, such as the FDA, or multi-national authorities, such as the EEC or

WHO. The amphiphilic molecules function by assisting the dispersion of mutually insoluble phases and stabilizing the resulting colloids, emulsions, and foams. Emulsifiers can interact with other food components such as carbohydrates, proteins, water, and ions to produce complexes and mesophases. These interactions may enhance or disrupt structures and affect functional properties of finished foods. In dairy processing, small molecule emulsifiers may displace dairy proteins from oil/water and air/water interfaces, which affects stability and properties of the foams and emulsions. In baked products, emulsifiers contribute to secondary functionalities, such as dough strengthening and anti-staling. Synthetic food emulsifiers suffer from the stigma of chemical names on a product's ingredient statement. Modern consumers are seeking products that are "all natural." Fortunately, there are a number of natural ingredients that are surface-active, such as lecithin, milk proteins, and some protein-containing hydrocolloids. Mayonnaise, for example, is stabilized by egg yolk. This book can serve as both a guide for professionals in the food industry to provide an understanding of emulsifier functionality, and a stimulus for further innovation. Students of food science will find this to be a valuable resource.

Experts are predicting that demand for marine fish oil will soon outstrip supply, creating extreme urgency within the global aquafeed industry to find viable

alternatives. Fish Oil Replacement and Alternative Lipid Sources in Aquaculture Feeds is the first comprehensive review of this multifaceted, complex issue. It also addresses the crucial questions about whether or not the industry will be able to meet increasing worldwide demand for fisheries products. The First & Only Book Specifically Addressing this Issue With contributions from more than 30 international experts, the book provides a global perspective on the production, rationale, and use of fish oils, vegetable oils, and animal fats in relation to the aquaculture and aquafeed industries. After a detailed discussion on alternative lipid sources, the book discusses groundbreaking research on the use of these lipid sources as fish oil substitutes, as well as their potential advantages and challenges for use in aquafeeds. Written by Leading Scientists & Industry Authorities Rounding out its solid coverage, the book then explores the important physiological effects of various lipid sources and their components on growth, lipid metabolism, health, and postharvest qualities of the farmed fish. Both timely and pertinent, Fish Oil Replacement and Alternative Lipid Sources in Aquaculture Feeds is the most authoritative and comprehensive review on the substitution of fish oil in aquaculture feeds addressing the issues, science, and future directions of using sustainable alternatives.

These proceedings contain the text of plenary sessions and papers from poster

sessions at the World Conference held in February 1994. In addition to sources, processing, and applications, the papers also address aspects of the marketing and economics of lauric oils. Among the specific topics: quality aspects of shipping and handling lauric oils and oleochemicals; the development and commercialization of high-lauric rapeseed oil; catalytic hydrogenation of lauric oils and fatty acids; and health effects of lauric oils compared to unsaturated vegetable oils. No index. Annotation copyright by Book News, Inc., Portland, OR

""Provides a comprehensive review of the major technologies and applications of lipids in food and nonfood uses, including current and future trends. Discusses the nature of lipids, their major sources, and role in nutrition.

The book is designed to provide a review on the methods and current status of conservation of the tropical plant species. It will also provide the information on the richness of the tropical plant diversity, the need to conserve, and the potential utilization of the genetic resources. Future perspectives of conservation of tropical species will be discussed. Besides being useful to researchers and graduate students in the field, we hope to create a reference for a much wider audience who are interested in conservation of tropical plant diversity.

Differential Scanning Calorimetry: Applications in Fat and Oil Technology provides a complete summary of the scientific literature about differential

scanning calorimetry (DSC), a well-known thermo-analytical technique that currently has a large set of applications covering several aspects of lipid technology. The book is divided into three major sections. The first section covers the applications of DSC to study cooling and heating profiles of the main source of oils and fats. The second is more theoretical, discussing the application of DSC coupled to related thermal techniques and other physical measurements. And the third covers specific applications of DSC in the field of quality evaluation of palm, palm kernel, and coconut oils and their fractions as well as of some other important aspects of lipid technology such as shortening and margarine functionality, chocolate technology, and food emulsion stability. This book is a helpful resource for academicians, food scientists, food engineers and technologists, food industry operators, government researchers, and regulatory agencies.

The edited volume presents the progress of first and second generation biofuel production technology in selected countries. Possibility of producing alternative fuels containing biocomponents and selected research methods of biofuels exploitation characteristics (also aviation fuels) was characterized. The book shows also some aspects of the environmental impact of the production and biofuels using, and describes perspectives of biofuel production technology

development. It provides the review of biorefinery processes with a particular focus on pretreatment methods of selected primary and secondary raw materials. The discussion includes also a possibility of sustainable development of presented advanced biorefinery processes.

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

The oil palm is a remarkable crop, producing around 40% of the world’s vegetable oil from around 6% of the land devoted to oil crops. Conventional breeding has clearly been the major focus of genetic improvement in this crop. A

mix of improved agronomy and management, coupled with breeding selection have quadrupled the oil yield of the crop since breeding began in earnest in the 1920s. However, as for all perennial crops with long breeding cycles, oil palm faces immense challenges in the coming years with increased pressure from population growth, climate change and the need to develop environmentally sustainable oil palm plantations. In Oil Palm: Breeding, Genetics and Genomics, world leading organizations and individuals who have been at the forefront of developments in this crop, provide their insights and experiences of oil palm research, while examining the different challenges that face the future of the oil palm. The editors have all been involved in research and breeding of oil palm for many years and use their knowledge of the crop and their disciplinary expertise to provide context and to introduce the different research topics covered.

This multi-compendium is a comprehensive, illustrated and scientifically up-to-date work covering more than a thousand species of edible medicinal and non-medicinal plants. This work will be of significant interest to scientists, researchers, medical practitioners, pharmacologists, ethnobotanists, horticulturists, food nutritionists, agriculturists, botanists, herbalogists, conservationists, teachers, lecturers, students and the general public. Topics covered include: taxonomy (botanical name and synonyms); common English

and vernacular names; origin and distribution; agro-ecological requirements; edible plant part and uses; botany; nutritive and medicinal/pharmacological properties, medicinal uses and current research findings; non-edible uses; and selected/cited references. Each volume covers about a hundred species arranged according to families and species. Each volume has separate scientific and common names indices and separate scientific and medical glossaries.
This book serves as a rich source of information on the production, processing, characterization and utilization of palm oil and its components. It also includes several topics related to oil palm genomics, tissue culture and genetic engineering of oil palm. Physical, chemical and polymorphic properties of palm oil and its components as well as the measurement and maintenance of palm oil quality are included and may be of interest to researchers and food manufacturers. General uses of palm oil/kernel oil and their fractions in food, nutritional and oleochemical products are discussed as well as the potential use of palm oil as an alternative to trans fats. Some attention is also given to palm biomass, bioenergy, biofuels, waste management, and sustainability. Presents several chapters related to oil palm genetics, including oil palm genomics, tissue culture and genetic engineering. Includes contributions from more than 80 well-known scientists and researchers in the field. In addition to chapters on food uses

of palm oil, the book contains nonfood applications such as use as a feedstock for wood-based products or for bioenergy. Covers key aspects important to the sustainable development of palm oil.

This book provides complete, comprehensive, and broad subject-based reviews for students, teachers, researchers, policymakers, conservationists, and NGOs interested in the biodiversity and conservation of woody plants. Forests cover approximately 31 percent of the world's total landmass; 93 percent is natural forest and only 7 percent consists of planted trees. Forest decline is progressing at an alarming rate worldwide. In addition to human activities (logging, deforestation, and exploiting forest lands for agriculture and industrial use), a number of other factors – including pests and diseases, drought, soil acidity, radiation, and ozone – are cumulatively contributing to global forest decline. The present situation forces us to focus on forest conservation strategies for the present and future. Gene conservation and maintaining genetic diversity in forest ecosystems are crucial to the preservation of forest genetic resources. This calls for integrated action to implement both the in situ (on site) preservation of forest stands and ex situ (distant from the original site) strategies for the conservation of woody plants' genetic resources. Selected priority areas include: 1) assessing patterns of genetic diversity and threats, 2) understanding the biological

processes regulating genetic diversity, 3) assessing the impact of human activities and climate change on genetic diversity, and 5) finding methods for prioritizing species and populations for the conservation of forest trees genetic resources. All chapters were written by leading scientists in their respective fields, which include: woody plant diversity, ecology and evolution; assessment of genetic diversity in forest tree populations; conservation planning under climate change; and in situ and ex situ strategies, including biotechnological approaches, for the conservation of woody plants genetic resources.

Bringing several disparate aspects of food science and analysis together in one place, Applications of Vibrational Spectroscopy to Food Science provides a comprehensive, state-of the-art text presenting the fundamentals of the methodology, as well as underlying current areas of research in food science analysis. All of the major spectroscopic techniques are also covered – showing how each one can be used beneficially and in a complementary approach for certain applications. Case studies illustrate the many applications in vibrational spectroscopy to the analysis of foodstuffs.

Quality Control in the Food Industry, Volume 2 focuses on quality control in the food industry, emphasizing the controllable factors that affect the quality of the finished product, including the selection of raw materials, processing, packaging,

storage, and distribution. The book describes the principles of quality control in industries such as soft drinks; dairy products; flour and bread; flour confectionery; meat and fish, and their products; and edible fats and oils. This volume is organized into seven chapters and begins with an overview of the various uses of water in the food industry, along with standards and methods of treatment of wastewaters produced by food manufacturers. The book then systematically discusses the quality tests in the dairy industry; quality control for flour and flour confectionery, including pastry and cakes; and quality control methods for manufactured meat products. The book also explains the quality control in the fish industry, and then concludes with a chapter on quality assessment for edible fats and oils and fat products, such as margarine; salad oils; frying fats and shortenings; mayonnaise and salad dressings; and creams. This book is a valuable source of information for food scientists and technologists; managers in the food industry; and students.

This volume incorporates 13 contributions from renowned experts from the relevant research fields that are related biodegradable and biobased polymers and their environmental and biomedical applications. Specifically, the book highlights: Developments in polyhydroxyalkanoates applications in agriculture, biodegradable packaging material and biomedical field like drug delivery systems, implants, tissue

engineering and scaffolds The synthesis and elaboration of cellulose microfibrils from sisal fibres for high performance engineering applications in various sectors such as the automotive and aerospace industries, or for building and construction The different classes and chemical modifications of tannins Electro-activity and applications of Jatropha latex and seed The synthesis, properties and applications of poly(lactic acid) The synthesis, processing and properties of poly(butylene succinate), its copolymers, composites and nanocomposites The different routes for preparation polymers from vegetable oil and the effects of reinforcement and nano-reinforcement on the physical properties of such biobased polymers The different types of modified drug delivery systems together with the concept of the drug delivery matrix for controlled release of drugs and for antitumor drugs The use of nanocellulose as sustainable adsorbents for the removal of water pollutants mainly heavy metal ions, organic molecules, dyes, oil and CO2 The main extraction techniques, structure, properties and different chemical modifications of lignins Proteins and nucleic acids based biopolymers The role of tamarind seed polysaccharide-based multiple-unit systems in sustained drug release This book compiles the fundamental advances resulting from of oil-palm genome and transcriptome sequencing, and describes the challenges faced and strategies applied in sequencing, assembling and annotating oil palm genome sequences. The availability of genome and transcriptome data has made the mining of a high number of new molecular markers useful for genetic diversity as well as marker-trait association

studies and the book presents high-throughput genotyping platforms, which allow the detection of QTL regions associated with interesting oil palm traits such as oil unsaturation and yield components using classical genetic and association mapping approaches. Lastly, it also presents the discovery of major genes governing economically important traits of the oil palm. Covering the history of oil palm expansion, classical and molecular cytogenetics, improvements based on wild and advanced genetic materials, and the science of oil palm breeding, the book is a valuable resource for scientists involved in plant genetic research.

The fifth volume in the Advances in lipid methodology series is the first with new editor, Richard O. Adlof, but its objectives are still those of the previous editor, William W. Christie: ‘To provide readable, up-to-date reviews of rapidly expanding areas of lipid analysis and practical examples which should be of immediate use to lipid analysts’. As in the previous volumes of Advances in lipid methodology, the editor has chosen leading international experts to write individual chapters. Volume 5 contains four chapters on specific methodologies of lipid analysis and three which describe specific applications or standardization of methods. The methodologies are different scanning calorimetry for the study of physical properties of fats and oils; silver ion chromatography; atmospheric-pressure chemical-ionization mass spectrometry (APCI-MS); and supercritical fluid chromatography (SFC). Chapters on specific applications cover the analysis of genetically modified oils and the use of fatty acid profiling in the

characterization of metabolic diseases. A further chapter provides an overview of the official standard methods used for fats and oils analysis and gives extensive listings of information on standards organizations.

Margarine, Second Revised Edition provides a comprehensive exposition of the chemistry, production, and nutritional aspects of margarine. The book surveys the invention of margarine and the development of the margarine industry, as well as its nutritional and statistical features. The raw materials, ingredients, and chemical nature of fats and oils needed for production are presented; the step-by-step processing and the biochemical interactions are described in detail; and the bacteriological processes during the preparation of milk and storage and preservation are discussed. This edition contains new information but still retains the general layout of the first edition. Food technologists, chemists, production engineers, and those curious about the production of margarine will find this book interesting.

Volume 2 of the updated and extended 3rd edition of this work focuses on the chemistry and technology of rigid polyurethanes. Recent developments in obtaining polyols from renewable resources and the field of rigid polyurethanes have been included. This book is of interest to chemists and engineers in industry and academia as well as anyone working with polyols for the manufacture of PUs.