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PolymersPaint and Coating Testing ManualPseudocerealsBiology Data BookExcipient Applications in Formulation Design and Drug DeliveryFood Analysis Laboratory ManualKarl Fischer Titration

Official Methods of Analysis of AOAC International

Clinical conformal radiotherapy is the holy grail of radiation treatment and is now becoming a reality through the combined efforts of physical scientists and engineers, who have improved the physical basis of radiotherapy, and the interest and concern of imaginative radiotherapists and radiographers. Intensity-Modulated Radiation Therapy describes in detail the physics germane to the development of a particular form of clinical conformal radiotherapy called intensity modulated radiation therapy (IMRT). IMRT has become a topic of tremendous importance in recent years and is now being seriously investigated for its potential to improve the outcome of radiation therapy. The book collates the state-of-the-art literature together with the author's personal research experience and that of colleagues in the field to produce a text suitable for new research workers, Ph.D. students, and practicing radiation physicists that require a thorough introduction to IMRT. Fully illustrated, indexed, and referenced, the book has been prepared in a form suitable for supporting a teaching course.

Animal Cell Technology

Presents a solid introduction to thermal analysis, methods,instrumentation, calibration, and application along with thenecessary theoretical background. Useful to chemists, physicists, materials scientists, andengineers who are new to thermal analysis techniques, and toexisting users of thermal analysis who wish expand their experienceto new techniques and applications Topics covered include Differential Scanning Calorimetry andDifferential Thermal Analysis (DSC/DTA), Thermogravimetry,Thermomechanical Analysis and Dilatometry, Dynamic MechanicalAnalysis, Micro-Thermal Analysis, Hot Stage Microscopy, andInstrumentation. Written by experts in the various areas of thermalanalysis Relevant and detailed experiments and examples follow eachchapter.

Characterization of Minerals, Metals, and Materials 2019

We are very pleased to introduce the Book Version of our Special Issue in Molecules dedicated to the memory of the late Professor Dr. Charles D. Hufford. The issue has been a huge success, with 22 full-length peer-reviewed papers and a tribute by Professor Alice M.Clark. Authors, reviewers, and collaborators from many countries across the worldhave contributed to this endeavour, and we are truly grateful to all. This Special Issue isrepresentative of the broad impact that “Charlie” had on the field of bioactive naturalproducts. This Special Issue

comprises papers from Professor Hufford's former students,colleagues, and collaborators throughout the world who have utilized a wide array ofstate-of-the-art techniques to examine diverse natural sources to isolate and identify avariety of natural products with a wide spectrum of biological activities, including somenew microbial transformations and insights into bioactive molecules. Many new bioactive compounds are described and reported here for the first time. Bioactivities reportedinclude cytotoxicity, antimicrobial activity, anti-inflammatory activity, antileishmanialactivity, antitrypanosomal activity, antimalarial activity, analgesic activity, and beneficialliver activities, just to name a few. This Special Issue will undoubtedly have a lasting impact on the field of bioactive natural products, as exemplified by the career of Dr. Hufford. Lastly, without the timely and outstanding contributions from all of you, this Special Issue would not have been possible. We thank you all very much for your contributions and your time devoted to this Special Issue in memory of a special person. Finally, we express ourgratitude and thanks to the journal Molecules and their excellent team of expert reviewers for giving us the support and opportunity to make this Special Issue a huge success!

Nutrition During Pregnancy and Lactation

This volume covers the structures, properties, and functions of G-quadruplexes in a wide range of biological disciplines, including therapeutic

intervention and biomaterial application. The chapters in this book explore a wide range of vital and new experimental techniques used in the study of G-quadruplexes. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Practical and cutting-edge, G-Quadruplex DNA: Methods and Protocols is a valuable resource for both novice and experienced researchers who work in biophysics, structural biology, computational biology, biochemistry, and molecular and cell biology, and who want to learn more about the potential roles and effects of G-quadruplex in these fields.

Routledge Handbook of Ecocultural Identity

Box Office

In recent years, emerging trends in the design and development of drug products have indicated ever greater need for integrated characterization of excipients and in-depth understanding of their roles in drug delivery applications. This book presents a concise summary of relevant scientific and mechanistic information that can aid the use of excipients in formulation design and drug delivery applications. Each chapter is contributed by chosen experts in their respective fields, which affords truly

in-depth perspective into a spectrum of excipient-focused topics. This book captures current subjects of interest – with the most up to date research updates – in the field of pharmaceutical excipients. This includes areas of interest to the biopharmaceutical industry users, students, educators, excipient manufacturers, and regulatory bodies alike.

Polymeric Materials

Rietveld Refinement in the Characterization of Crystalline Materials

Widely regarded as a standard work in its field, this book introduces the range of processing techniques that are used in food manufacturing. It explains the principles of each process, the processing equipment used, operating conditions and the effects of processing on micro-organisms that contaminate foods, the biochemical properties of foods and their sensory and nutritional qualities. The book begins with an overview of important basic concepts. It describes unit operations that take place at ambient temperature or involve minimum heating of foods. Subsequent chapters examine operations that heat foods to preserve them or alter their eating quality, and explore operations that remove heat from foods to extend their shelf life with minimal changes in nutritional quality or sensory characteristics. Finally, the book reviews post-processing operations, including packaging and distribution logistics. The third edition has been substantially rewritten, updated

and extended to include the many developments in food technology that have taken place since the second edition was published in 2000. Nearly all unit operations have undergone significant developments, and these are reflected in the large amount of additional material in each chapter. In particular, advances in microprocessor control of equipment, 'minimal' processing technologies, genetic modification of foods, functional foods, developments in 'active' or 'intelligent' packaging, and storage and distribution logistics are described. Developments in technologies that relate to cost savings, environmental improvement or enhanced product quality are highlighted. Additionally, sections in each chapter on the impact of processing on food-borne micro-organisms are included for the first time.

Practical Forensic Microscopy

Alternative and renewable energy sources already play a very decisive role in the development of human society, helping to fulfill increasing energy demands from both industrialized and underdeveloped countries, as well as economic needs, which must comply with a decarbonized economy, decreasing the energy impact on the global environment. Among these alternative energy sources, fuels such as biodiesel, methanol, and methane are good examples of how the previous design can be achieved, as these fuels can be obtained from renewable sources, used in applications such as transportation systems, electricity generation, fuel conversion, and even for

electricity storage, with reduced impact on air emissions. This Special Issue includes papers on new and innovative technical developments or approaches, reviews, case studies, as well as assessment, papers from different disciplines, which are relevant to the optimization of biodiesel, methane/methanol production systems, simultaneously resulting in air quality improvement.

National Health and Nutrition Examination Survey (Nhanes)

Construction materials are the most widely used materials for civil infrastructure in our daily lives. However, from an environmental point of view, they consume a huge amount of natural resources and generate the majority of greenhouse gasses. Therefore, many new and novel technologies for designing environmentally friendly construction materials have been developed recently. This Special Issue, “Environment-Friendly Construction Materials”, has been proposed and organized as a means to present recent developments in the field of construction materials. It covers a wide range of selected topics on construction materials.

Environment-Friendly Construction Materials

The use of human in vitro fertilization in the management of infertility is the outgrowth of years of laboratory observations on in vitro sperm-egg interaction. "The editors of this work have themselves

contributed significantly to basic knowledge of the mammalian fertilization process. The observations of Don Wolf on sperm penetration, the block to polyspermy and, most recently, sperm hyperactivation in the monkey and human, Gregory Kopf's elucidation of the mechanisms of sperm activation during penetration and the reciprocal dialogue between sperm and egg, and Barry Bavister's definition of culture conditions and requirements necessary for in vitro oocyte maturation, fertilization and development in model mammalian systems including nonhuman primates have contributed greatly to our understanding of the mammalian fertilization process. Wolf, Kopf and Gerrity have enjoyed substantial interaction with clinicians in Departments of Obstetrics and Gynecology and have been directly involved with successful IVF programs. Both Wolf and Kopf have served as research scientists in the Division of Reproductive Biology at the University of Pennsylvania, which, for more than 22 years, has fostered co-mingling of clinically oriented and basic science faculty. It is through such interaction, which clearly exists at many institutions including the University of Wisconsin, that the process of technology transfer is best served. Without an exquisitely coordinated laboratory, there can be no consistent success in human in vitro fertilization. Quality control is pivotal, but close collaboration between the laboratory and the clinic is also essential as information is shared and correlated.

Food Processing Technology

The Routledge Handbook of Ecocultural Identity brings the ecological turn to sociocultural understandings of self. The editors introduce a broad, insightful assembly of original theory and research on planetary positionalities in flux in the Anthropocene – or what in this Handbook cultural ecologist David Abram presciently renames the Humilocene, a new "epoch of humility." Forty international authors craft a kaleidoscopic lens, focusing on the following key interdisciplinary inquiries: Part I illuminates identity as always ecocultural, expanding dominant understandings of who we are and how our ways of identifying engender earthly outcomes. Part II examines ways ecocultural identities are fostered and how difference and spaces of interaction can be sources of environmental conviviality. Part III illustrates consequential ways the media sphere informs, challenges, and amplifies particular ecocultural identities. Part IV delves into the constitutive power of ecocultural identities and illuminates ways ecological forces shape the political sphere. Part V demonstrates multiple and unspooling ways in which ecocultural identities can evolve and transform to recall ways forward to reciprocal surviving and thriving. The Routledge Handbook of Ecocultural Identity provides an essential resource for scholars, teachers, students, protectors, and practitioners interested in ecological and sociocultural regeneration.

Business Periodicals Index

The crystalline state is the most commonly used

essential solid active pharmaceutical ingredient (API). The characterization of pharmaceutical crystals encompasses many scientific disciplines, but the core is crystal structure analysis, which reveals the molecular structure of essential pharmaceutical compounds. Crystal structure analysis provides important structural information related to the API's wide range of physicochemical properties, such as solubility, stability, tablet performance, color, and hygroscopicity. This book entitled “Pharmaceutical Crystals" focuses on the relationship between crystal structure and physicochemical properties. In particular, the new crystal structure of pharmaceutical compounds involving multi-component crystals, such as co-crystals, salts, and hydrates, and polymorph crystals are reported. Such crystal structures were investigated in the latest studies that combined morphology, spectroscopic, theoretical calculation, and thermal analysis with crystallographic study. This book highlights the importance of crystal structure information in many areas of pharmaceutical science and presents current trends in the structure–property study of pharmaceutical crystals. The Guest Editors of this book hope the readers enjoy a wide variety of recent studies on Pharmaceutical Crystals.

Intensity-Modulated Radiation Therapy

The Karl Fischer titration is used in many different ways following its publication in 1935 and further applications are continually being explored. At the present time we are experiencing another phase of

expansion, as shown by the development of new titration equipment and new reagents. KF equipment increasingly incorporates microprocessors which enable the course of a titration to be programmed thus sim plifying the titration. Coulometric titrators allow water determinations in the micro gram-range: the KF titration has become a micro-method. The new pyridine-free re agents make its application significantly more pleasant and open up further possibili ties on account of their accuracy. To make the approach to Karl Fischer titrations easier, we have summarized the present knowledge in this monograph and we have complemented it with our own studies and practical experience. As this book should remain "readable", we have tried to keep the fundamentals to a minimum. Historical developments are only mentioned if they seem to be necessary for understanding the KF reaction. The ap plications are described more fully. Specific details which may interest a particular reader can be found in the original publications cited. The referenced literature is in chronological order as the year of publication may also prove informative. Thus, [6902] for example denotes 69 for 1969 being the year of publication and 02 is a non-recurring progressive number. The referenced litera ture includes summaries which we hope will be of help to find the "right" publica tion easily.

Who's who in the Midwest

This collection focuses on the characterization of minerals, metals, and materials as well as the

application of characterization results on the processing of these materials. Papers cover topics such as clays, ceramics, composites, ferrous metals, non-ferrous metals, minerals, electronic materials, magnetic materials, environmental materials, advanced materials, and soft materials. In addition, papers covering materials extraction, materials processing, corrosion, welding, solidification, and method development are included. This book provides a current snapshot of characterization in materials science and its role in validating, informing, and driving current theories in the field of materials science. This volume will serve the dual purpose of furnishing a broad introduction of the field to novices while simultaneously serving to keep subject matter experts up-to-date.

Characterization of Minerals, Metals, and Materials 2016

The goals of the 10th International Space Conference on “Protection of Materials and Structures from Space Environment” ICPMSE-10J, since its inception in 1992, have been to facilitate exchanges between members of the various engineering and science disciplines involved in the development of space materials, including aspects of LEO, GEO and Deep Space environments, ground-based qualification, and in-flight experiments and lessons learned from operational vehicles that are closely interrelated to disciplines of the atmospheric sciences, solar-terrestrial interactions and space life sciences. The knowledge of environmental conditions on and around

the Moon, Mars, Venus and the low Earth orbit as well as other possible candidates for landing such as asteroids have become an important issue, and protecting both hardware and human life from the effects of space environments has taken on a new meaning in light of the increased interest in space travel and colonization of other planets. And while many material experiments have been carried out on the ground and in open space in the last 50 years (LDEF, MEEP, SARE, MISSE, AOP, DSPSE, ESEM, EURECA, HST, MDIM, MIS, MPID, MPAC and SEED), many questions regarding the environmental impact of space on materials remain either poorly understood or unanswered. The coming generations of scientists will have to continue this work and tackle new challenges, continuing to build the level of confidence humans will need to continue the colonization of space. It is hoped that the proceedings of the ICPMSE-10J presented in this book will constitute a small contribution to doing so.

The American Contractor

The Characterization of High-temperature Vapors

Isolation and Structure Elucidation of Bioactive Compounds (Dedicated to the memory of the late Professor Charles D. Hufford)

Handbooks of tables that cover genetics; cytology; reproduction; development and growth; biological regulators and toxins; environment; parasitism in plants and animals; nutrition; digestion and excretion; and blood and other body fluids. Each volume contains its own index. Many references.

Protection of Materials and Structures From the Space Environment

This book is designed as a laboratory manual of methods used for the preparation and extraction of organic chemical compounds from food sources. It offers ideas on how to facilitate progress towards the total automation of the assay, as well as proposing assays for unknowns by comparison with known methods. Beginning with an introduction to extraction methodology, Extraction of Organic Analytes from Foods then progresses through sample preparation, extraction techniques (partition, solvation, distillation, adsorption and diffusion) and applications. Subject indices for the applications are organised by commodity, method, chemical class and analyte, and provide useful examples of references from the literature to illustrate historical development of the techniques. Examples of methods that have been compared, combined or used in collaborative trials have been correlated and used to form the beginnings of a database that can be expanded and updated to provide a laboratory reference source. Logically structured and with numerous examples, Extraction of Organic Analytes from Foods will be invaluable to practising food analysts as both a

reference and training guide. In addition, the introductory sections in each chapter have been written with food science and technology students in mind, making this an important title for academic libraries.

Official Gazette of the United States Patent and Trademark Office

Characterization is an important and fundamental step in material research before and after processing. This bookfocuses on the characterization of minerals, metals, and materials as well as the application of characterization results on the processing of these materials. It is a highly authoritative collection of articles written by experts from around the world. The articles center on materials characterization, extraction, processing, corrosion, welding, solidification, and method development. In addition, articles focus on clays, ceramics, composites, ferrous metals, non-ferrous metals, minerals, electronic, magnetic, environmental, advanced and soft materials. This book will serve the dual purpose of furnishing a broad introduction of the field to novices while simultaneously serving to keep subject matter experts up-to-date.

Structural Design and Properties of Coordination Polymers

The average person can name more bird species than they think, but do we really know what a bird “species” is? This open access book takes up several

fascinating aspects of bird life to elucidate this basic concept in biology. From genetic and physiological basics to the phenomena of bird song and bird migration, it analyzes various interactions of birds – with their environment and other birds. Lastly, it shows imminent threats to birds in the Anthropocene, the era of global human impact. Although it seemed to be easy to define bird species, the advent of modern methods has challenged species definition and led to a multidisciplinary approach to classifying birds. One outstanding new toolbox comes with the more and more reasonably priced acquisition of whole-genome sequences that allow causative analyses of how bird species diversify. Speciation has reached a final stage when daughter species are reproductively isolated, but this stage is not easily detectable from the phenotype we observe. Culturally transmitted traits such as bird song seem to speed up speciation processes, while another behavioral trait, migration, helps birds to find food resources, and also coincides with higher chances of reaching new, inhabitable areas. In general, distribution is a major key to understanding speciation in birds. Examples of ecological speciation can be found in birds, and the constant interaction of birds with their biotic environment also contributes to evolutionary changes. In the Anthropocene, birds are confronted with rapid changes that are highly threatening for some species. Climate change forces birds to move their ranges, but may also disrupt well-established interactions between climate, vegetation, and food sources. This book brings together various disciplines involved in observing bird species come into existence, modify, and vanish. It is a rich resource for

bird enthusiasts who want to understand various processes at the cutting edge of current research in more detail. At the same time it offers students the opportunity to see primarily unconnected, but booming big-data approaches such as genomics and biogeography meet in a topic of broad interest. Lastly, the book enables conservationists to better understand the uncertainties surrounding “species” as entities of protection.

Multiparticulate Drug Delivery

This collection gives broad and up-to-date results in the research and development of materials characterization and processing. Topics covered include characterization methods, ferrous materials, non-ferrous materials, minerals, ceramics, polymer and composites, powders, extraction, microstructure, mechanical behavior, processing, corrosion, welding, solidification, magnetic, electronic, environmental, nano-materials, and advanced materials The book explores scientific processes to characterize materials using modern technologies, and focuses on the interrelationships and interdependence among processing, structure, properties, and performance of materials.

Frugal Innovation and the New Product Development Process

This two-volume set (CCIS 175 and CCIS 176) constitutes the refereed proceedings of the International Conference on Computer Education,

Simulation and Modeling, CSEM 2011, held in Wuhan, China, in June 2011. The 148 revised full papers presented in both volumes were carefully reviewed and selected from a large number of submissions. The papers cover issues such as multimedia and its application, robotization and automation, mechatronics, computer education, modern education research, control systems, data mining, knowledge management, image processing, communication software, database technology, artificial intelligence, computational intelligence, simulation and modeling, agent based simulation, biomedical visualization, device simulation & modeling, object-oriented simulation, Web and security visualization, vision and visualization, coupling dynamic modeling theory, discretization method , and modeling method research.

Bird Species

Anthropometry is the study of the measurement of the human body in terms of the dimensions of bone, muscle, and adipose (fat) tissue. The word “anthropometry” is derived from the Greek word “anthropo” meaning “human” and the Greek word “metron” meaning “measure”. The field of anthropometry encompasses a variety of human body measurements. Weight, stature (standing height), recumbent length, skinfold thicknesses, circumferences (head, waist, limb), limb lengths, and breadths (shoulder, wrist) are examples of anthropometric measures. Several indexes and ratios can be derived from anthropometric measurements.

Perhaps the most well-known indicator of body fatness is the body mass index or “BMI.” BMI values are calculated for NHANES participants using measured height and weight values as follows: weight (kilograms)/height (meters squared). BMI criteria are used to screen for weight categories: underweight (BMI values less than 18.5), normal or desirable weight (BMI values 18.5-24.9), overweight (BMI values 25.0-29.9), obese-Class I (BMI values 30.0-34.9), obese-Class II (BMI values 35.0-39.9), and extremely obese (BMI values greater than 40.0) (National Institutes of Health, 1998). The NHANES BMI results are used to track weight trends in the U.S. population. The National Institutes of Health, Centers for Disease Control and Prevention (CDC), and many other research groups have reported on the health risks associated with overweight and obesity using NHANES interview and health examination data.

Manual of Seed Handling in Genebanks

G-Quadruplex Nucleic Acids

This book explores the new product development process of firms developing frugal innovation for the base-of-the-pyramid (BOP) markets in developing countries. Frugal innovations are products characterised by an affordable price-point, durability, usability and core functionalities that are highly adapted to BOP consumers’ needs. Frugal products have the potential to drive the development progress and living standards of low-income consumers. With

an innovation framework developed from worldwide frugal case studies, this book provides detailed insights through two in-depth start-up firms in Indonesia that have successfully launched frugal products for the low-income market. These two start-ups have addressed two major development challenges for not just Indonesia, but also the global BOP market – traditional methods of cooking and access to clean drinking water. A detailed roadmap is developed from insights into the processes and management decisions of these two start-ups and combined with previous studies on frugal products. Providing a detailed roadmap across the different phases and stages of the new product development process when developing frugal products, this book will be insightful to not only innovators but also investors and government agencies supporting their activities.

Advanced Research on Computer Education, Simulation and Modeling

In Vitro Fertilization and Embryo Transfer

This book collects the articles published in the Special Issue “Polymeric Materials: Surfaces, Interfaces and Bioapplications”. It shows the advances in polymeric materials, which have tremendous applications in agricultural films, food packaging, dental restoration, antimicrobial systems, and tissue engineering. These polymeric materials are presented as films, coatings,

particles, fibers, hydrogels, or networks. The potential to modify and modulate their surfaces or their content by different techniques, such as click chemistry, ozonation, breath figures, wrinkle formation, or electrospray, are also explained, taking into account the relationship between the structure and properties in the final application. Moreover, new trends in the development of such materials are presented, using more environmental friendly and safe methods, which, at the same time, have a high impact on our society.

Characterization of Minerals, Metals, and Materials 2015

Optimization of Biodiesel, Methanol and Methane Production and Air Quality Improvement

Pregnancy is a viewed as a window to future health. With the birth of the developmental origins of human adult disease hypothesis, research and clinical practice has turned its attention to the influence of maternal factors such as health and lifestyle surrounding pregnancy as a means to understand and prevent the inter-generational inheritance of chronic disease susceptibility. Outcomes during pregnancy have long-lasting impacts on both women on children. Moreover, nutrition early in life can influence growth and the establishment of lifelong eating habits and behaviors. This Special Issue on “Nutrition during Pregnancy and Lactation: Implications for Maternal

and Infant Health" is intended to highlight new epidemiological, mechanistic and interventional studies that investigate maternal nutrition around the pregnancy period on maternal and infant outcomes. Submissions may include original research, narrative reviews, and systematic reviews and meta-analyses.

Extraction of Organic Analytes from Foods

This book is a printed edition of the Special Issue "Rietveld Refinement in the Characterization of Crystalline Materials" that was published in Crystals

Pharmaceutical Crystals

This book is a printed edition of the Special Issue "Structural Design and Properties of Coordination Polymers" that was published in Crystals

Thermal Analysis of Polymers

Paint and Coating Testing Manual

Pseudocereals

Authored by leading experts from academia, users and manufacturers, this book provides an authoritative account of the science and technology involved in multiparticulate drug delivery systems which offer superior clinical and technical advantages

over many other specialized approaches in drug delivery. The book will cover market trends, potential benefits and formulation challenges for various types of multiparticulate systems. Drug solubility, dose, chemistry and therapeutic indications as well as excipient suitability coupled with manufacturing methods will be fully covered. Key approaches for taste-masking, delayed release and extended release of multiparticulates systems are of significant interest, especially their in-vivo and in-vitro performance. In addition, the principles of scale-up, QbD, and regulatory aspects of common materials used in this technology will be explained, as well as recent advances in materials and equipment enabling robust, flexible and cost-effective manufacture. Case studies illustrating best practices will also make the book a valuable resource to pharmaceutical scientists in industry and academia.

Biology Data Book

Animal Cell Technology: from Biopharmaceuticals to Gene Therapy provides a comprehensive insight into biological and engineering concepts related to mammalian and insect cell technology, as well as an overview of the applications of animal cell technology. Part 1 of the book covers the Fundamentals upon which this technology is based and covers the science underpinning the technology. Part 2 covers the Applications from the production of therapeutic proteins to gene therapy. The authors of the chapters are internationally-recognized in the field of animal cell culture research and have extensive experience

in the areas covered in their respective chapters.

Excipient Applications in Formulation Design and Drug Delivery

This second edition laboratory manual was written to accompany Food Analysis, Fourth Edition, ISBN 978-1-4419-1477-4, by the same author. The 21 laboratory exercises in the manual cover 20 of the 32 chapters in the textbook. Many of the laboratory exercises have multiple sections to cover several methods of analysis for a particular food component of characteristic. Most of the laboratory exercises include the following: introduction, reading assignment, objective, principle of method, chemicals, reagents, precautions and waste disposal, supplies, equipment, procedure, data and calculations, questions, and references. This laboratory manual is ideal for the laboratory portion of undergraduate courses in food analysis.

Food Analysis Laboratory Manual

The aim of this book is to update knowledge and summarise recent research on pseudocereals, particularly regarding their botanical characteristics, composition, structure, use, production, technology and impact on human health. In the last few years, pseudocereals – in particular amaranth and quinoa – have acquired increased importance (which is also due to the increased demand for gluten?]free food). Worldwide, the demand for amaranth and quinoa has risen immensely, as seen in rising prices for amaranth

and quinoa. At the same time, research in all relevant fields has intensified. At present there is some confusion surrounding the term ‘pseudocereals’ and what it does and does not include, for example kiwicha which is Amaranthus caudatus or kaniwa which is Chenopodium pallidicaule. Sometimes other grains are included in the pseudocereal group like chia (Salvia hispanica L), an oleaginous seed. One of the aims of the book is to clear up some of the confusion over what is included in the group of pseudocereals. The book will include: the origin, production and utilization of pseudocereals; structure and composition of kernels; carbohydrates/fibre/bioactive compounds of kernels; proteins and amino acids of kernels; lipids of kernels; pseudocereal dry and wet milling: processes, products and applications; food uses of whole pseudocereals; pseudocereals in gluten free products; and the nutritional and health implications of pseudocereal intake.

Karl Fischer Titration

Forensic Microscopy: A Laboratory Manual will provide the student with a practical overview and understanding of the various microscopes and microscopic techniques employed within the field of forensic science. Each laboratory experiment has been carefully designed to cover the variety of evidence disciplines within the forensic science field with carefully set out objectives, explanations of each topic and worksheets to help students compile and analyse their results. The emphasis is placed on the

practical aspects of the analysis to enrich student understanding through hands on experience. The experiments move from basic through to specialised and have been developed to cover a variety of evidence disciplines within forensic science field. The emphasis is placed on techniques currently used by trace examiners. This unique, forensic focused, microscopy laboratory manual provides objectives for each topic covered with experiments designed to reinforce what has been learnt along with end of chapter questions, report requirements and numerous references for further reading. Impression evidence such as fingerprints, shoe tread patterns, tool marks and firearms will be analysed using simple stereomicroscopic techniques. Body fluids drug and trace evidence (e.g. paint glass hair fibre) will be covered by a variety of microscopes and specialized microscopic techniques.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION