Essential Chemistry For Formulators Of Semisolid And Liquid Dosages

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Micro- and Nanoengineered Gum-Based Biomaterials for Drug Delivery and Biomedical Applications - Sougata Jana 2022-02-01 Micro- and Nanoengineered Gum-Based Biomaterials for Drug Delivery and Biomedical Applications focuses on micro- and nanotechnology in gums and biopolymers as drug and biomolecule carriers and their

applications in biomedicine. Currently, natural gums and polymers are widely utilized as biocarrier systems, to deliver drugs and biomolecules to the target site, for prolonged release and the desired therapeutic effect. Natural gums and polymers are important because they are easily available from natural sources and are characteristically biodegradable, biocompatible, and nontoxic. Natural gums and polymers are also chemically modified with other polymers, in the presence of cross-linking agents, to develop scaffolds, matrices, composites, and interpenetrating polymer networks using micro- and nanotechnology. The book also discusses biological applications, such as gene delivery, cancer therapy, tissue engineering, bioimaging, and theranostics. This book is an important reference source for biomaterials scientists, biomedical engineers, and pharmaceutical scientists, who are looking to increase their understanding of how micro- and nanoengineered biomaterials are being used to create more efficient gum-based drug delivery systems. Explains how micro- and nanoengineering is being used to make a variety of gum types more effective as nanocarriers. Explores the major biomedical applications of various gum classes. Assesses the major challenges of using micro- and nanotechnologies in gum-based biomedical systems.

Voigt's Pharmaceutical Technology - Alfred Fahr 2018-04-23

A textbook which is both comprehensive and comprehensible and that offers easy but scientifically sound reading to both students and professionals Now in its 12th edition in its native German, Voigt's Pharmaceutical Technology is an interdisciplinary textbook covering the fundamental principles of pharmaceutical technology. Available for the first time in English, this edition is produced in full colour throughout, with a concise, clear structure

developed after consultation with students, instructors and researchers. This book: Features clear chapter layouts and easily digestible content Presents novel trends, devices and processes Discusses classical and modern manufacturing processes Covers all formulation principles including tablets, ointments, capsules, nanosystems and biopharmaceutics Takes account of legal requirements for both qualitative and quantitative composition Addresses quality assurance considerations Uniquely relates contrasting international pharmacopeia from EU, US and Japan to formulation principles Includes examples and text boxes for quicker data assimilation Written for both students studying pharmacy and industry professionals in the field as well as toxicologists, biochemists, medical lab technicians, Voigt's Pharmaceutical Technology is the essential resource for understanding the various aspects of pharmaceutical technology.

Nanocosmeceuticals - Malay K. Das 2022-08-31

Cosmetics are a fast-growing segment in the global personal care industry and the application of nanocosmeceuticals are on the rise. Conventional cosmetics greatly lack specific delivery systems, prolong effects and relatively heavy doses may be necessary. One of the common complaints of consumers is rather short-term activity of cosmetics, especially in face care products. Nanocosmeceuticals, having more advanced nutrient delivery mechanisms, carry more task specific nutrients to the skin deep where it can be metabolized and used to nourish cells. It can help to increase the aesthetic appeal of a product influencing the purchase decision of a consumer. Nanocosmeceuticals: Innovation, Application and Safety highlights the trends and applications of nanotechnology in cosmeceuticals for more

advance and task specific nutrients delivery and long term effects of personal care products using liposome, solid lipid nanoparticles, nanostructured lipid carriers, transferosomes, niosomes, phytosomes, nanoemulsions, silver nanoparticles, chitin nanofibrils etc. It also provides the detailed information on regulatory laws, safety and marketing aspects of cosmeceuticals. This book offers an indispensable guide for professors, researchers, students, formulation chemists as well as formulation scientists in academia and industry; beauticians and decision-makers in consumer organizations. First book on 'Nanocosmeceuticals' Serves as a valuable resource of scientific innovations, novel applications, safety and regulations of Nanocosmeceuticals Offers an updated and highly structured reference material for students, researchers, professors, formulation chemists and scientists

Polyvinylpyrrolidone Excipients for Pharmaceuticals - Volker Bühler 2005

The book describes the properties, analytical methods and the applications of different polyvinylpyrrolidone excipients (povidone, crospovidone, copovidone etc.) for use in pharmaceutical preparations. This group of excipients is one of the most important excipients used in modern technology to produce drugs. The book is intended for all persons working in the research, development and quality control of drugs. It gives a survey of all applications in solid, liquid and semisolid dosage forms including many drug formulation examples and more than 600 references to the literature.

Pharmaceutical and Clinical Calculations, 2nd Edition - Mansoor A. Kahn 2000-04-06

Pharmaceutical and clinical calculations are critical to the delivery of safe, effective, and competent patient care and professional practice. Pharmaceutical and Clinical

Calculations, Second Edition addresses this crucial component, while emphasizing contemporary pharmacy practices. Presenting the information in a well-organized and easy-to-understand manner, the authors explain the principles of clinical calculations involving dose and dosing regimens in patients with impaired organ functions, aminoglycoside therapy, pediatric and geriatric dosing, and radiopharmaceuticals with appropriate examples. Each chapter begins with an introduction to the topic, followed by a comprehensive discussion. Key concepts are highlighted throughout the book for easy retrieval. The examples presented in the text reflect the practice environment in community, hospital, and nuclear pharmacy settings, and the clinical problems presented reflect a direct application of underlying theoretical principles and discussions. Pharmaceutical and Clinical Calculations, Second Edition is an essential tool for any practitioner who needs to reinforce their knowledge of the subject and is a valuable study guide for the Pharmacy Board examination.

The Role of Microstructure in Topical Drug Product Development - Nigel Langley 2019-08-07

Following the Semi-solid Microstructure Workshop sponsored by BASF and hosted by the Rutgers Center for Dermal Research, a pharmaceutical product development working group was formed. The group, known as the Q3 Working Group, selected the following five areas of focus: Particle/Globule Size and Distribution, Viscosity/Rheology/Spreadability, In Vitro Testing, State of API, State of Excipients. A committee was appointed for each of these five areas. The committees were tasked to review the literature, identify best practices, list experimental details required for an independent lab to duplicate the test, and propose scientific studies that may meaningfully advance this specific area of focus. Each

committee has a chair (or co-chairs) that are the lead author(s) of the chapter. The Q3 Working Group members serve as the critical reviewers of each chapter, making suggestions that improve the quality of the document and that make each of the five chapters uniform in scope and content.Pharmaceutical development scientists that formulate topical products (creams, lotions, gels suspensions, foams, etc) and all the allied raw material suppliers, packaging suppliers, contract laboratories including CROs, CMOs and regulators need access to this book. Overall, the topic of semisolid microstructure is of equal importance to the generic pharmaceutical companies (filing Abbreviated New Drug Applications or ANDAs) and pharmaceutical companies filing New Drug Applications (NDAs). In addition to products applied to the skin, hair, and nails, The Role of Microstructure in Topical Drug Product Development' crosses over and is essential reading to developers of oral suspensions, ophthalmic ointments and gels, otic suspension, vaginal semisolids and retention enemas.

Drug Delivery Systems - 2019-10-23

Drug Delivery Systems examines the current state of the field within pharmaceutical science and concisely explains the history of drug delivery systems, including key developments. The book translates the physicochemical properties of drugs into drug delivery systems administered via various routes, such as oral, parenteral, transdermal and inhalational. Regulatory and product development topics are also explored. Written by experts in the field, this volume in the Advances in Pharmaceutical Product Development and Research series deepens our understanding of drug delivery systems within the pharmaceutical sciences industry and research, as well as in chemical engineering. Each chapter delves into a particular aspect of this

fundamental field to cover the principles, methodologies and technologies employed by pharmaceutical scientists. This book provides a comprehensive examination that is suitable for researchers and advanced students working in pharmaceuticals, cosmetics, biotechnologies, and related industries. Provides up-to-date information on how to translate the physicochemical properties of drugs into drug delivery systems Explores how drugs are administered via various routes, such as oral, parenteral, transdermal and inhalational Contains extensive references and further reading for course and self-study

Chemical Engineering in the Pharmaceutical Industry - David J. am Ende 2019-04-23

A guide to the development and manufacturing of pharmaceutical products written for professionals in the industry, revised second edition The revised and updated second edition of Chemical Engineering in the Pharmaceutical Industry is a practical book that highlights chemistry and chemical engineering. The book's regulatory quality strategies target the development and manufacturing of pharmaceutically active ingredients of pharmaceutical products. The expanded second edition contains revised content with many new case studies and additional example calculations that are of interest to chemical engineers. The 2nd Edition is divided into two separate books: 1) Active Pharmaceutical Ingredients (API's) and 2) Drug Product Design, Development and Modeling. The active pharmaceutical ingredients book puts the focus on the chemistry, chemical engineering, and unit operations specific to development and manufacturing of the active ingredients of the pharmaceutical product. The drug substance operations section includes information on chemical reactions, mixing, distillations, extractions, crystallizations, filtration, drying, and wet and dry

milling. In addition, the book includes many applications of process modeling and modern software tools that are geared toward batch-scale and continuous drug substance pharmaceutical operations. This updated second edition: Contains 30new chapters or revised chapters specific to API, covering topics including: manufacturing quality by design, computational approaches, continuous manufacturing, crystallization and final form, process safety Expanded topics of scale-up, continuous processing, applications of thermodynamics and thermodynamic modeling, filtration and drying Presents updated and expanded example calculations Includes contributions from noted experts in the field Written for pharmaceutical engineers, chemical engineers, undergraduate and graduate students, and professionals in the field of pharmaceutical sciences and manufacturing, the second edition of Chemical Engineering in the Pharmaceutical Industryf ocuses on the development and chemical engineering as well as operations specific to the design, formulation, and manufacture of drug substance and products.

Sample Preparation of Pharmaceutical Dosage Forms - Beverly Nickerson 2011-08-05

This book is intended to serve as a resource for analysts in developing and troubleshooting sample preparation methods. These are critical activities in providing accurate and reliable data throughout the lifecycle of a drug product. This book is divided into four parts: • Part One covers dosage form and diluent properties that impact sample preparation of pharmaceutical dosage forms and the importance of sampling considerations in generating data representative of the drug product batch. • Part Two reviews specific sample preparation techniques typically used with pharmaceutical dosage forms. • Part Three discusses sample preparation method development for different types

of dosage forms including addressing drug excipient interactions and post extraction considerations, as well as method validation and applying Quality by Design (QbD) principles to sample preparation methods. • Part Four examines additional topics in sample preparation including automation, investigating aberrant potency results, green chemistry considerations for sample preparation and the ideal case where no sample preparation is required for sample analysis. *Polymer Nanocomposites for Energy Applications* - T. Daniel Thangadurai 2022-09-13 Polymer Nanocomposites for Energy Applications Explore the science of polymer nanocomposites and their practical use in energy applications In Polymer Nanocomposites for Energy Applications, a team of distinguished researchers delivers a comprehensive review of the synthesis and characterization of polymer nanocomposites, as well as their applications in the field of energy. Succinct and insightful, the book explores the storage of electrical, magnetic, and thermal energy and hydrogen. It also discusses energy generation by polymer-based solar cells. Finally, the authors present a life cycle analysis of polymer nanocomposites for energy applications and provide four real-world case studies where these materials have been successfully used. Readers will also find: Thorough introductions to the origins and synthesis of polymer materials In-depth discussions of the characterization of polymeric materials, including UV-visible spectroscopy Comprehensive explorations of a wide variety of polymer material applications, including in biotechnology and for soil remediation Fulsome presentations of polymer nanocomposites and their use in energy storage systems Perfect for materials and engineering scientists and polymer chemists, Polymer Nanocomposites for Energy Applications will also earn a

place in the libraries of professionals working in the chemical industry.

Marine Biomaterials - Sougata Jana 2022-02-14

This book is focused on marine based biomedical carriers for delivery of therapeutics. Marine biomaterials and bio-based carriers show wide applications in pharmaceutical as well as biomedical fields for delivery of small and large molecules. Biomaterial-based composites, scaffolds or matrix systems are promising systems for controlled and prolonged release of drug in target site and control the premature release of drugs or bioactive compounds. This book discusses the targeted delivery of drugs and therapeutic applications. It also describes the use of marine biopolymers in cancer therapy. Different chapters describe the tissue engineering techniques to develop these carriers. The marine biomaterial-based systems are widely used for tissue engineering, and biomedical imaging. This book is meant for industry experts, students and researchers in the area of pharmaceutical sciences, biomedical engineering and material science and pharmacology.

Cosmetic Formulation - Heather A.E. Benson 2019-04-05

Cosmetics are the most widely applied products to the skin and include creams, lotions, gels and sprays. Their formulation, design and manufacturing ranges from large cosmetic houses to small private companies. This book covers the current science in the formulations of cosmetics applied to the skin. It includes basic formulation, skin science, advanced formulation, and cosmetic product development, including both descriptive and mechanistic content with an emphasis on practical aspects. Key Features: Covers cosmetic products/formulation from theory to practice Includes case studies to illustrate real-life formulation development and problem solving Offers a practical, user-friendly approach, relying on the work of recognized experts in the

field Provides insights into the future directions in cosmetic product development Presents basic formulation, skin science, advanced formulation and cosmetic product development

Airborne Microplastics: Analysis, Fate and Human Health Effects - 2023-02-01

Airborne Microplastics: Analysis, Fate and Human Health Effects, Volume 105 in the Comprehensive Analytical Chemistry series, highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors. Provides the authority and expertise of leading contributors from an international board of authors Presents the latest release in the Comprehensive Analytical Chemistry series Updated release includes the latest information on Airborne Microplastics: Analysis, Fate and Human Health Effects

Medicinal Chemistry - Gareth Thomas 2011-09-20

Medicinal Chemistry: An Introduction, Second Edition provides a comprehensive, balanced introduction to this evolving and multidisciplinary area of research. Building on the success of the First Edition, this edition has been completely revised and updated to include the latest developments in the field. Written in an accessible style, Medicinal Chemistry: An Introduction, Second Edition carefully explains fundamental principles, assuming little in the way of prior knowledge. The book focuses on the chemical principles used for drug discovery and design covering physiology and biology where relevant. It opens with a broad overview of the subject with subsequent chapters examining topics in greater depth. From the reviews of the First Edition: "It contains a wealth of information in a compact form" ANGEWANDTE CHEMIE, INTERNATIONAL EDITION "Medicinal Chemistry is certainly a text I would chose to teach from for undergraduates. It fills a unique niche in the market place." PHYSICAL SCIENCES

AND EDUCATIONAL REVIEWS

Advanced 3D-Printed Systems and Nanosystems for Drug Delivery and Tissue Engineering - Lisa Du Toit 2020-03-08

Advanced 3D-Printed Systems and Nanosystems for Drug Delivery and Tissue Engineering explores the intricacies of nanostructures and 3D printed systems in terms of their design as drug delivery or tissue engineering devices, their further evaluations and diverse applications. The book highlights the most recent advances in both nanosystems and 3D-printed systems for both drug delivery and tissue engineering applications. It discusses the convergence of biofabrication with nanotechnology, constructing a directional customizable biomaterial arrangement for promoting tissue regeneration, combined with the potential for controlled bioactive delivery. These discussions provide a new viewpoint for both biomaterials scientists and pharmaceutical scientists. Shows how nanotechnology and 3D printing are being used to create systems which are intelligent, biomimetic and customizable to the patient Explores the current generation of nanostructured 3D printed medical devices Assesses the major challenges of using 3D printed nanosystems for the manufacture of new pharmaceuticals

Handbook of Pharmaceutical Manufacturing Formulations - Safaraz K. Niazi 2016-04-19

No other area of regulatory compliance receives more attention and scrutiny by regulatory authorities than the regulation of sterile products, for obvious reasons. With the increasing number of potent products, particularly the new line of small protein products, joining the long list of proven sterile products, the technology of manufacturing ster

Compounded Topical Pain Creams - National Academies of Sciences, Engineering, and Medicine 2020-07-21

Pain is both a symptom and a disease. It manifests in multiple forms and its treatment is complex. Physical, social, economic, and emotional consequences of pain can impair an individual's overall health, well-being, productivity, and relationships in myriad ways. The impact of pain at a population level is vast and, while estimates differ, the Centers for Disease Control and Prevention reported that 50 million U.S. adults are living in pain. In terms of pain's global impact, estimates suggest the problem affects approximately 1 in 5 adults across the world, with nearly 1 in 10 adults newly diagnosed with chronic pain each year. In recent years, the issues surrounding the complexity of pain management have contributed to increased demand for alternative strategies for treating pain. One such strategy is to expand use of topical pain medicationsâ€"medications applied to intact skin. This nonoral route of administration for pain medication has the potential benefit, in theory, of local activity and fewer systemic side effects. Compounding is an age-old pharmaceutical practice of combining, mixing, or adjusting ingredients to create a tailored medication to meet the needs of a patient. The aim of compounding, historically, has been to provide patients with access to therapeutic alternatives that are safe and effective, especially for people with clinical needs that cannot otherwise be met by commercially available FDA-approved drugs. Compounded Topical Pain Creams explores issues regarding the safety and effectiveness of the ingredients in these pain creams. This report analyzes the available scientific data relating to the ingredients used in compounded topical pain creams and offers recommendations regarding the treatment of patients.

Basic Fundamentals of Drug Delivery - 2018-11-30

Basic Fundamentals of Drug Delivery covers the

fundamental principles, advanced methodologies and technologies employed by pharmaceutical scientists, researchers and pharmaceutical industries to transform a drug candidate or new chemical entity into a final administrable drug delivery system. The book also covers various approaches involved in optimizing the therapeutic performance of a biomolecule while designing its appropriate advanced formulation. Provides up-to-date information on translating the physicochemical properties of drugs into drug delivery systems Explores how drugs are administered via various routes, such as orally, parenterally, transdermally or through inhalation Contains extensive references and further reading for course and self-study

Essentials of Industrial Pharmacy - Saeed Ahmad Khan 2022-05-05

Essentials of Industrial Pharmacy is an attempt to comprehensively present, in a single book, various pharmaceutical processes and equipment that are frequently used for production of pharmaceutical dosage forms, along with quality control tests of these dosage forms. Pictorial/graphical illustrations provide easier understanding of complex pharmaceutical concepts, manufacturing processes of pharmaceutical dosage forms. Since it is imperative for pharmacy students to have a clear understanding of the basic concepts used in development of drugs into suitable and stable dosage forms. This book offers a wealth of information regarding basic aspects of pharmaceutical processes and dosage forms, in a single book, for undergraduate pharmacy students or science students (with no pharmacy background) intended to work in the pharmaceutical Industry.

Pharmaceutical Calculations - Mitchell J. Stoklosa 1986

Functional Food Products and Sustainable Health - Saghir Ahmad 2020-08-29

There is a growing global

awareness of the link between good diet and health. This fascinating book reviews various functional foods or nutraceuticals and the bio-active compounds they contain in order to identify the role of bioactive compounds such as nisin, micronutrients, and hydrocolloids in the diet in overall human health. It also provides up-to-date information on functional elements like antioxidants, dietary fibres, pre & probiotics, vitamins and mineral-enriched foods in the human diet. Consisting of fifteen chapters, the book offers a systematic review of the key factors in the preparation of functional foods from selected sources, and also describes the processing, preservation and packaging of a range of functional food products. This book is a valuable resource for students and researchers working in the field of food science, food technology, and nutrition, as well as for industry experts.

Chemical Engineering in the Pharmaceutical Industry - Mary T. am Ende 2019-04-08

A guide to the important chemical engineering concepts for the development of new drugs, revised second edition The revised and updated second edition of Chemical Engineering in the Pharmaceutical Industry offers a guide to the experimental and computational methods related to drug product design and development. The second edition has been greatly expanded and covers a range of topics related to formulation design and process development of drug products. The authors review basic analytics for quantitation of drug product quality attributes, such as potency, purity, content uniformity, and dissolution, that are addressed with consideration of the applied statistics, process analytical technology, and process control. The 2nd Edition is divided into two separate books: 1) Active Pharmaceutical Ingredients (API's) and 2) Drug Product Design, Development and Modeling. The contributors explore technology transfer

and scale-up of batch processes that are exemplified experimentally and computationally. Written for engineers working in the field, the book examines in-silico process modeling tools that streamline experimental screening approaches. In addition, the authors discuss the emerging field of continuous drug product manufacturing. This revised second edition: Contains 21 new or revised chapters, including chapters on quality by design, computational approaches for drug product modeling, process design with PAT and process control, engineering challenges and solutions Covers chemistry and engineering activities related to dosage form design, and process development, and scale-up Offers analytical methods and applied statistics that highlight drug product quality attributes as design features Presents updated and new example calculations and associated solutions Includes contributions from leading experts in the field Written for pharmaceutical engineers, chemical engineers, undergraduate and graduation students, and professionals in the field of pharmaceutical sciences and manufacturing, Chemical Engineering in the Pharmaceutical Industry, Second Edition contains information designed to be of use from the engineer's perspective and spans information from solid to semi-solid to lyophilized drug products.

Pharmaceutical Formulation - Geoffrey D Tovey 2018-06-25 Formulation is a key step in the drug design process, where the active drug is combined with other substances that maximise the therapeutic potential, safety and stability of the final medicinal product. Modern formulation science deals with biologics as well as small molecules. Regulatory and quality demands, in addition to advances in processing technologies, result in growing challenges as well as possibilities for the field. Pharmaceutical Formulation provides an up to date source

of information for all who wish to understand the principles and practice of formulation in the drug industry. The book provides an understanding of the links between formulation theory and the practicalities of processing in a commercial environment, giving researchers the knowledge to produce effective pharmaceutical products that can be approved and manufactured. The first chapters introduce readers to different dosage forms, including oral liquid products, topical products and solid dosage forms such as tablets and capsules. Subsequent chapters cover pharmaceutical coatings, controlled release drug delivery and dosage forms designed specifically for paediatric and geriatric patients. The final chapter provides an introduction to the vital role intellectual property plays in drug development. Covering modern processing methods and recent changes in the regulatory and quality demands of the industry, Pharmaceutical Formulation is an essential, up to date resource for students and researchers working in academia and in the pharmaceutical industry.

Development and Validation of Analytical Methods - Christopher M. Riley 1996-05-29

The need to validate an analytical or bioanalytical method is encountered by analysts in the pharmaceutical industry on an almost daily basis, because adequately validated methods are a necessity for approvable regulatory filings. What constitutes a validated method, however, is subject to analyst interpretation because there is no universally accepted industry practice for assay validation. This book is intended to serve as a guide to the analyst in terms of the issues and parameters that must be considered in the development and validation of analytical methods. In addition to the critical issues surrounding method validation, this book also deals with other related factors such as method

development, data acquisition, automation, cleaning validation and regulatory considerations. The book is divided into three parts. Part One, comprising two chapters, looks at some of the basic concepts of method validation. Chapter 1 discusses the general concept of validation and its role in the process of transferring methods from laboratory to laboratory. Chapter 2 looks at some of the critical parameters included in a validation program and the various statistical treatments given to these parameters. Part Two (Chapters 3, 4 and 5) of the book focuses on the regulatory perspective of analytical validation. Chapter 3 discusses in some detail how validation is treated by various regulatory agencies around the world, including the United States, Canada, the European Community, Australia and Japan. This chapter also discusses the International Conference on Harmonization (ICH) treatment of assay validation. Chapters 4 and 5 cover the issues and various perspectives of the recent United States vs. Barr Laboratories Inc. case involving the retesting of samples. Part Three (Chapters 6 - 12) covers the development and validation of various analytical components of the pharmaceutical product development process. This part of the book contains specific chapters dedicated to bulk drug substances and finished products, dissolution studies, robotics and automated workstations, biotechnology products, biological samples, analytical methods for cleaning procedures and computer systems and computer-aided validation. Each chapter goes into some detail describing the critical development and related validation considerations for each topic. This book is not intended to be a practical description of the analytical validation process, but more of a guide to the critical parameters and considerations that must be attended to in a pharmaceutical development program. Despite the existence

of numerous guidelines including the recent attempts by the ICH to be implemented in 1998, the practical part of assay validation will always remain, to a certain extent, a matter of the personal preference of the analyst or company. Nevertheless, this book brings together the perspectives of several experts having extensive experience in different capacities in the pharmaceutical industry in an attempt to bring some consistency to analytical method development and validation.

Delivering Therapeutics to the Inner Ear - Peter S. Steyger 2021-08-17

Topic Editor Benjamin Shapiro is President and co-founder of Otomagnetics. Topic Editor Sylvain Celanire is a co-Founder and Chief Executive Officer of PRAGMA Therapeutics. All other Topic Editors declare no competing commercial interests with regards to the Research Topic subject.

Excipient Development for Pharmaceutical, Biotechnology, and Drug Delivery Systems - Ashok Katdare 2006-07-28

To facilitate the development of novel drug delivery systems and biotechnology-oriented drugs, the need for new excipients to be developed and approved continues to increase. Excipient Development for Pharmaceutical, Biotechnology, and Drug Delivery Systems serves as a comprehensive source to improve understanding of excipients and forge new avenue

FASTtrack Pharmaceutics Dosage Form and Design, 2nd edition - David S. Jones 2016-06-13

FASTtrack Pharmaceutics – Dosage Form and Design focuses on what you really need to know in order to pass your pharmacy exams. It provides concise, bulleted information, key points, tips and an all-important self-assessment section, including MCQs.

Developing Solid Oral Dosage Forms - Yihong Qiu 2016-11-08

Developing Solid Oral Dosage

Forms: Pharmaceutical Theory and Practice, Second Edition illustrates how to develop high-quality, safe, and effective pharmaceutical products by discussing the latest techniques, tools, and scientific advances in preformulation investigation, formulation, process design, characterization, scale-up, and production operations. This book covers the essential principles of physical pharmacy, biopharmaceutics, and industrial pharmacy, and their application to the research and development process of oral dosage forms. Chapters have been added, combined, deleted, and completely revised as necessary to produce a comprehensive, well-organized, valuable reference for industry professionals and academics engaged in all aspects of the development process. New and important topics include spray drying, amorphous solid dispersion using hot-melt extrusion, modeling and simulation, bioequivalence of complex modified-released dosage forms, biowaivers, and much more. Written and edited by an international team of leading experts with experience and knowledge across industry, academia, and regulatory settings Includes new chapters covering the pharmaceutical applications of surface phenomenon, predictive biopharmaceutics and pharmacokinetics, the development of formulations for drug discovery support, and much more Presents new case studies throughout, and a section completely devoted to regulatory aspects, including global product regulation and international perspectives

Comprehensive Foodomics - 2020-11-12

Comprehensive Foodomics offers a definitive collection of over 150 articles that provide researchers with innovative answers to crucial questions relating to food quality, safety and its vital and complex links to our health. Topics covered include transcriptomics, proteomics, metabolomics, genomics, green foodomics, epigenetics and noncoding

RNA, food safety, food bioactivity and health, food quality and traceability, data treatment and systems biology. Logically structured into 10 focused sections, each article is authored by world leading scientists who cover the whole breadth of Omics and related technologies, including the latest advances and applications. By bringing all this information together in an easily navigable reference, food scientists and nutritionists in both academia and industry will find it the perfect, modern day compendium for frequent reference. List of sections and Section Editors: Genomics - Olivia McAuliffe, Dept of Food Biosciences, Moorepark, Fermoy, Co. Cork, Ireland Epigenetics & Noncoding RNA - Juan Cui, Department of Computer Science & Engineering, University of Nebraska-Lincoln, Lincoln, NE Transcriptomics - Robert Henry, Queensland Alliance for Agriculture and Food Innovation, The University of Queensland, St Lucia, Australia Proteomics - Jens Brockmeyer, Institute of Biochemistry and Technical Biochemistry, University Stuttgart, Germany Metabolomics - Philippe Schmitt-Kopplin, Research Unit Analytical BioGeoChemistry, Neuherberg, Germany Omics data treatment, System Biology and Foodomics - Carlos Leon Canseco, Visiting Professor, Biomedical Engineering, Universidad Carlos III de Madrid Green Foodomics - Elena Ibanez, Foodomics Lab, CIAL, CSIC, Madrid, Spain Food safety and Foodomics - Djuro Josić, Professor Medicine (Research) Warren Alpert Medical School, Brown University, Providence, RI, USA & Sandra Kraljević Pavelić, University of Rijeka, Department of Biotechnology, Rijeka, Croatia Food Quality, Traceability and Foodomics - Daniel Cozzolino, Centre for Nutrition and Food Sciences, The University of Queensland, Queensland, Australia Food Bioactivity, Health and Foodomics - Miguel Herrero, Department of Bioactivity and Food Analysis, Foodomics Lab, CIAL, CSIC, Madrid, Spain

Brings all relevant foodomics information together in one place, offering readers a 'one-stop,' comprehensive resource for access to a wealth of information Includes articles written by academics and practitioners from various fields and regions Provides an ideal resource for students, researchers and professionals who need to find relevant information quickly and easily Includes content from high quality authors from across the globe

Nanoscale Networking and Communications Handbook - John R. Vacca 2019-07-05

This comprehensive handbook serves as a professional reference as well as a practitioner's guide to today's most complete and concise view of nanoscale networking and communications. It offers in-depth coverage of theory, technology, and practice as they relate to established technologies and recent advancements. It explores practical solutions to a wide range of nanoscale networking and communications issues. Individual chapters, authored by leading experts in the field, address the immediate and long-term challenges in the authors' respective areas of expertise.

Preformulation in Solid Dosage Form Development - Moji Christianah Adeyeye 2008-01-07

During the onset of any clinical trial there are many factors and variables to consider. Funding, time restraints, and regulatory agency guidelines are factors that often influence which variables will be studied, leaving other important information out of the study. Preformulation in Solid Dosage Form Development covers every topic of critical importance to the preformulation stages of drug development. Serving as a handbook or stand-alone reference, this text equips those in academia and the pharmaceutical industry with both basic and applied principles for the characterization of drugs, excipients, and products, and deals with the issues relating

to predictability, identification, and product development during preformulation stages through Phase I of clinical trials. With contributions from an international panel of experts in the field, this guide: outlines an updated preformulation program for modern drug development issues that includes particle morphology, characterization, thermal analysis, and solubility methods contains rational designs for the structure of formulation studies covers the importance of preformulation design using artificial neural networks and computational prediction techniques, and examines the concepts of preliminary-preformulation discusses the typical drug-excipient interactions that could occur during the course of development and methods of characterization includes novel methods to determine the physical and chemical stability of new formulations reviews the structure, content, and format of the preformulation report examines the significance of drug substance physiochemical properties, in regulatory quality by design

Encapsulación de probióticos - Marcelo Fernando Valle Vargas 2022-04-23

Con el propósito de incrementar la viabilidad de los probióticos durante su almacenamiento, inclusión en el alimento de los peces y extrusión, así como en el paso por el tracto gastrointestinal, se hace necesario el uso de técnicas para la protección de los probióticos en estos ambientes. Dentro de estas técnicas se encuentra la encapsulación. Varios estudios se han enfocado en la utilización de probióticos en la alimentación de tilapia, siendo las más comunes las especies de los géneros Bacillus y Lactobacillus. No obstante, los reportes de encapsulación de probióticos para tilapia son escasos. A partir de lo anterior, se espera que este libro contribuya en el ámbito académico, científico, industrial, económico, social y ambiental. En lo académico y científico, ya que con la información presentada se

pueden generar ideas que conduzcan a la estructuración de proyectos de investigación que den como resultado la generación de nuevo conocimiento, junto con su apropiación y circulación. De este modo, podrá ser utilizado tanto en la acuicultura, especialmente en el cultivo de tilapia y peces continentales, como también en el desarrollo de futuras investigaciones con peces marinos, todo con el objetivo de mejorar la productividad, lo que podría generar mayores ingresos a los empresarios, oportunidades de empleo y bienestar social. Adicionalmente, al ser consecuentes con los Objetivos de Desarrollo Sostenible, gracias a la reducción en el uso de antibióticos, se tendrá menor impacto ambiental.

Essential Chemistry for Formulators of Semisolid and Liquid Dosages - Vitthal S. Kulkarni 2015-10-15

A needed resource for pharmaceutical scientists and cosmetic chemists, Essential Chemistry for Formulators of Semisolid and Liquid Dosages provides insight into the basic chemistry of mixing different phases and test methods for the stability study of nonsolid formulations. The book covers foundational surface/colloid chemistry, which forms the necessary background for making emulsions, suspensions, solutions, and nano drug delivery systems, and the chemistry of mixing, which is critical for further formulation of drug delivery systems into semisolid (gels, creams, lotions, and ointments) or liquid final dosages. Expanding on these foundational principles, this useful guide explores stability testing methods, such as particle size, rheological/viscosity, microscopy, and chemical, and closes with a valuable discussion of regulatory issues. Essential Chemistry for Formulators of Semisolid and Liquid Dosages offers scientists and students the foundation and practical guidance to make and analyze semisolid and liquid formulations. Unique coverage of the underlying

chemistry that makes possible stable dosages Quality content written by experienced experts from the drug development industry Valuable information for academic and industrial scientists developing topical and liquid dosage formulations for pharmaceutical as well as skin care and cosmetic products

Strategi Peningkatan Kelarutan Bahan Aktif Farmasi - Dwi Setyawan 2019-10-13

Bahan aktif farmasi beredar di pasaran dalam berbagai bentuk sediaan dan saat ini lebih dari 40% memiliki kelarutan yang jelek dalam air. Senyawa-senyawa baru dengan potensi farmakologis yang dihasilkan pada riset penemuan obat baru pun cenderung bersifat hidrofobik, sehingga berimbas pada kelarutannya yang rendah. Hal ini menjadikan tantangan tersendiri bagi para formulator untuk membuat sediaan farmasi dengan aksi mula segera yang memerlukan kelarutan bahan aktif farmasi yang tinggi dalam air. Berbagai strategi bermunculan guna mengatasi permasalahan kelarutan tersebut, dibahas dalam ratusan artikel, dan teorinya terus berkembang hingga saat ini.

Introduction to Cosmetic Formulation and Technology - Gabriella Baki 2022-12-12

Introduction to Cosmetic Formulation and Technology An accessible and practical review of cosmetics and OTC drug-cosmetic products In the newly revised second edition of Introduction to Cosmetic Formulation and Technology, veteran educator and researcher Dr. Gabriella Baki delivers a comprehensive discussion of cosmetics and personal care products, including coverage of basic concepts, ingredient selection, formulation technology, and testing. The book offers a clear and easy-to-understand review of cosmetics and over the counter (OTC) drug-cosmetic products available in the United States. In this latest edition, the author expands on general concepts and adds brand-new chapters on the basics of cosmetics testing,

ingredients, and skin lightening products. Each chapter includes a summary of common abbreviations with questions provided online, alongside a solutions manual for instructors. Readers will also find: A thorough introduction to the basic definitions, claims, and classifications of cosmetics and OTC drug-cosmetic products Comprehensive explorations of the current rules and regulations for cosmetics and OTC drug-cosmetic products in the United States and European Union Detailed review of cosmetic ingredients, functions, and typical uses both in a dedicated a chapter and included within various others Practical coverage of good manufacturing practices for cosmetics, including documentation, buildings and facilities, equipment, and personnel Fulsome review of a variety of skin and hair care products, color cosmetics, and other personal care products Perfect for undergraduate and graduate students studying cosmetic science in chemistry, chemical engineering, pharmaceutical, biomedical, and biology departments, Introduction to Cosmetic Formulation and Technology will also benefit cosmetic chemists, cosmetic product formulators, cosmetic scientists, quality control managers, cosmetic testing specialists, and technicians.

Handbook of Pharmaceutical Salts Properties, Selection, and Use - P. Heinrich Stahl 2008-08-04

This comprehensive up-to-date guide and information source is an instructive companion for all scientists involved in research and development of drugs and, in particular, of pharmaceutical dosage forms. The editors have taken care to address every conceivable aspect of the preparation of pharmaceutical salts and present the necessary theoretical foundations as well as a wealth of detailed practical experience in the choice of pharmaceutically active salts. Altogether, the contributions reflect the

multidisciplinary nature of the science involved in selection of suitable salt forms for new drug products.

Characterization of Nanoencapsulated Food Ingredients - 2020-03-07

Characterization of Nanoencapsulated Food Ingredients, Volume Four in the Nanoencapsulation in the Food Industry series, introduces some of the common instrumental analysis and characterization methods for the evaluation of nanocarriers and nanoencapsulated ingredients in terms of their morphology, size distribution, surface charge and composition, appearance, physicochemical and rheological properties, and antioxidant activity. Divided in five sections, the book covers the qualitative and quantitative properties of nanoencapsulated food ingredients by different characterization techniques, besides correlating nanocarrier behavior to their physicochemical and functional properties. Authored by a team of global experts in the fields of nano- and microencapsulation of food, nutraceutical, and pharmaceutical ingredients, this title is of great value to those engaged in the various fields of nanoencapsulation and nanodelivery systems. Shows how different properties of nanoencapsulated food ingredients can be analyzed Presents the mechanism of each characterization technique Investigates how the analytical results can be understood with nanoencapsulated ingredients

Nanoarchitectonics in Biomedicine - Alexandru Mihai Grumezescu 2019-03-20

Nanoarchitectonics in Biomedicine describes this new area of nanoscience that has emerged as a major branch of nanoscience. The book brings together recent applications and discusses the advantages and disadvantages of each process, offering international perspectives on the technologies based on these findings. It offers new insights for nanoarchitectonics, starting with the currently used methods of synthesis and

characterization of such materials, along with their biomedical applications. Authored by a wide range of international scientists, this volume shows how nanoarchitectonics is being used to create more efficient medical treatment solutions. Users will find this to be an important research resource for those wanting to learn more on the emerging topic of nanoarchitectonics in biomedical science. Explores how design aspects, smart materials and personalized materials are used in biomedicine today Offers global perspectives on how nanoarchitectonics is used in different regions Presents an important research resource for those wanting to learn more on the emerging topic of nanoarchitectonics in biomedical science

Aulton's Pharmaceutics - Michael E. Aulton 2013

"Pharmaceutics is the art of pharmaceutical preparations. It encompasses design of drugs, their manufacture and the elimination of micro-organisms from the products. This book encompasses all of these areas."--Provided by publisher.

Handbook of Pharmaceutical Manufacturing Formulations - Sarfaraz K. Niazi 2004-04-27

The third volume in the six-volume Handbook of Pharmaceutical Manufacturing Formulations, this book covers liquid drugs, which include formulations of non-sterile drugs administered by any route in the form of solutions (monomeric and multimeric), suspensions (powder and liquid), drops, extracts, elixirs, tinctures, paints, sprays, colloidons, emul