

An Introduction To Pharmaceutical Sciences Production Chemistry Techniques And Technology Woodhead Publishing Series In Biomedicine

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 Remington
 Introduction to Pharmaceutical Analysis
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 Concepts and Applications

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BARRERA NORRIS

Application of Molecular Modeling in Drug Delivery Academic Press

Biomedical & Pharmaceutical Sciences with Patient Care Correlations provides a solid foundation in the areas of science that pharmacy students most need to understand to succeed in their education and career. Offering a comprehensive overview of the biomedical and pharmaceutical sciences, it is an ideal primary or secondary textbook for introductory courses. Students can also use this text to refresh their scientific knowledge before beginning graduate study. Biomedical & Pharmaceutical Sciences with Patient Care Correlations includes 16 chapters that cover subjects ranging from cell biology and medicinal chemistry to toxicology and biostatistics. It also includes clinical correlations and integrated cases. Practical as well as informative, this essential reference relates the subject matter to the real world of pharmacy practice to assist students throughout their graduate studies and professional careers. Features Provides a comprehensive introduction to the biomedical and pharmaceutical sciences curriculum Serves

as an ideal text for all introductory pharmacy courses Covers the topics that are most challenging for students Relates science to the real world of pharmacy practice Includes over 525 illustrations, photos, and figures

HPLC for Pharmaceutical Scientists John Wiley & Sons

Studies of thermodynamics often fail to demonstrate how the mathematical intricacies of the subject relate to practical laboratory applications. Thermodynamics of Pharmaceutical Systems makes these connections clear, emphasizing specific applications to pharmaceutical systems in a study created specifically for contemporary curriculums at colleges of pharmacy. Students investigating drug discovery, drug delivery, and drug action will benefit from Kenneth Connors's authoritative treatment of the fundamentals of thermodynamics as well as his attention to drug molecules and experimental considerations. An extensive appendix that reviews the mathematics needed to master the pharmacy curriculum proves an invaluable reference. Connors divides his one-of-a-kind text into three sections: Basic Thermodynamics, Thermodynamics of Physical Processes, and Thermodynamics of Chemical Processes; chapters include: Energy and the First Law of Thermodynamics The Entropy Concept Phase Transformations Solubility Acid-Base Equilibria Noncovalent Binding Equilibria Thermodynamics need not be a mystery nor be confined to the realm of mathematical theory. Thermodynamics of Pharmaceutical Systems introduces students of pharmacy to the profound thermodynamic applications in

the laboratory while also serving as a handy resource for practicing researchers.

Pharmaceutical Powder and Particles Jones & Bartlett Publishers

This textbook is the first to present a systematic introduction to chemical analysis of pharmaceutical raw materials, finished pharmaceutical products, and of drugs in biological fluids, which are carried out in pharmaceutical laboratories worldwide. In addition, this textbook teaches the fundamentals of all the major analytical techniques used in the pharmaceutical laboratory, and teaches the international pharmacopoeias and guidelines of importance for the field. It is primarily intended for the pharmacy student, to teach the requirements in "analytical chemistry" for the 5 years pharmacy curriculum, but the textbook is also intended for analytical chemists moving into the field of pharmaceutical analysis. Addresses the basic concepts, then establishes the foundations for the common analytical methods that are currently used in the quantitative and qualitative chemical analysis of pharmaceutical drugs. Provides an understanding of common analytical techniques used in all areas of pharmaceutical development. Suitable for a foundation course in chemical and pharmaceutical sciences. Aimed at undergraduate students of degrees in Pharmaceutical Science/Chemistry Analytical Science/Chemistry, Forensic analysis. Includes many illustrative examples.

Pharmaceutical Biotechnology Elsevier

Pharmaceutical Biotechnology offers students taking Pharmacy and related Medical and Pharmaceutical courses a comprehensive introduction to the fast-moving area of biopharmaceuticals. With a particular focus on the subject taken from a pharmaceutical perspective, initial chapters offer a broad introduction to protein science and recombinant DNA technology- key areas that underpin the whole subject. Subsequent chapters focus upon the development, production and analysis of these substances. Finally the book moves on to explore the science, biotechnology and medical applications of specific biotech products categories. These include not only protein-based substances but also nucleic acid and cell-based products. Introduces essential principles underlining modern biotechnology- recombinant DNA technology and protein science an invaluable introduction to this fast-moving subject aimed specifically at pharmacy and medical students includes specific 'product category chapters' focusing on the pharmaceutical, medical and therapeutic properties of numerous biopharmaceutical products. Entire chapter devoted to the principles of genetic engineering and how these drugs are developed. Includes numerous relevant case studies to enhance student understanding no prior knowledge of protein structure is assumed.

Introduction to the Pharmaceutical Sciences Springer

The Quality Control of Medicines documents the proceedings of the 35th International Congress of Pharmaceutical Sciences, organized by the Pharmaceutical Society of Ireland on behalf of the Federation Internationale Pharmaceutique, held in Dublin, on 1-5 September 1975. The theme chosen for the Congress was "the basis for the quality control of medicines", because of the importance and relevance of quality control in the production and distribution of medicines at national and international levels. This volume is arranged according to the manner in which the theme of the Congress was developed by the eminent invited speakers. Following the inaugural address a main symposium was held where five speakers presented a review of the quality control of medicines under the general headings of (i) chemical and physical aspects; (ii) biological aspects; (iii) control of drug delivery systems; (iv) storage problems; and (v) problems of international control. Certain aspects of the content of the main symposium were then developed in greater depth in parallel symposia. In the first parallel symposium some novel physicochemical aspects of the quality control of medicines were treated under the headings of spectrofluorimetry, mass spectrometry, detection in gas chromatography, and automation in pharmaceutical analysis. The second parallel symposium developed certain microbiological aspects of quality control under the headings of sterility testing and microbiological control of non-sterile products and ophthalmic preparations. The final symposium on submissions to regulatory bodies and international aspects of drug control covered aspects of politics in submissions, regulatory problems in small countries, and various pharmacopoeial problems.

Biomedical & Pharmaceutical Sciences with Patient Care Correlations Lippincott Williams & Wilkins

With over 100 illustrations, Volume 1 addresses the core disciplines of pharmaceuticals (absorption, PK, excipients, tablet dosage forms, and packaging), and explores the challenges and paradigms of pharmaceuticals. Key topics in Volume 1 include: • principles of drug absorption, chemical kinetics, and drug stability • pharmacokinetics • the effect of route of administration and distribution on drug action • in vivo imaging of dose forms: gamma scintigraphy, PET imaging NMR, MRI, etc. • powder technology • excipient design and characterization • preformulation • optimization techniques in pharmaceutical formulation and processing • disperse and surfactant systems • the solid state, tablet dosage forms, coating processes, and hard and soft shell capsules • parenteral products

Applied Pharmacometrics An Introduction to Pharmaceutical Sciences Production, Chemistry, Techniques and Technology

Understanding the Basics of QSAR for Applications in Pharmaceutical Sciences and Risk Assessment describes the historical evolution of quantitative structure-activity relationship (QSAR) approaches and their fundamental principles. This book includes clear, introductory coverage of the statistical methods applied in QSAR and new QSAR techniques, such as HQSAR and G-QSAR. Containing real-world examples that illustrate important methodologies, this book identifies QSAR as a valuable tool for many different applications, including drug discovery, predictive toxicology and risk assessment. Written in a straightforward and engaging manner, this is the ideal resource for all those looking for general and practical knowledge of QSAR methods. Includes numerous practical examples related to QSAR methods and applications. Follows the Organization for Economic Co-operation and Development principles for QSAR model development. Discusses related techniques such as structure-based design and the combination of structure- and ligand-based design tools.

Statistical Methodology in the Pharmaceutical Sciences John Wiley & Sons

A state-of-the-art handbook of statistical analysis for use in the pharmaceutical industry. Areas covered in this reference/text include: bioavailability, repeated-measures designs, dose-response, population models, multicenter trials, handling dropouts, survival analysis, robust data analysis, categorical data analysis.

FASTtrack: Chemistry of Drugs LWW

This textbook is the first to present a systematic introduction to chemical analysis of pharmaceutical raw materials, finished pharmaceutical products, and of drugs in biological fluids, which are carried out in pharmaceutical laboratories worldwide. In addition, this textbook teaches the fundamentals

of all the major analytical techniques used in the pharmaceutical laboratory, and teaches the international pharmacopoeias and guidelines of importance for the field. It is primarily intended for the pharmacy student, to teach the requirements in "analytical chemistry" for the 5 years pharmacy curriculum, but the textbook is also intended for analytical chemists moving into the field of pharmaceutical analysis. Addresses the basic concepts, then establishes the foundations for the common analytical methods that are currently used in the quantitative and qualitative chemical analysis of pharmaceutical drugs. Provides an understanding of common analytical techniques used in all areas of pharmaceutical development. Suitable for a foundation course in chemical and pharmaceutical sciences. Aimed at undergraduate students of degrees in Pharmaceutical Science/Chemistry Analytical Science/Chemistry, Forensic analysis. Includes many illustrative examples.

Essential Statistics for the Pharmaceutical Sciences Biohealthcare Publishing (Oxford) Limited

This unique textbook provides an introductory, yet comprehensive overview of the pharmaceutical sciences. It is the first text of its kind to pursue an interdisciplinary approach. Readers are introduced to basic concepts related to the specific disciplines in the pharmaceutical sciences, including pharmacology, pharmaceuticals, pharmacokinetics, and medicinal chemistry. In an easy-to-read writing style, the book provides readers with up-to-date information on pharmacogenomics and includes comprehensive coverage of industrial drug development and regulatory approval processes. Each chapter includes critical-thinking exercises, as well as numerous figures, tables, and graphs. Many chapters contain review questions, practice problems, and cases. More than 160 illustrations complement the text.

Essentials of Pharmaceutical Chemistry John Wiley & Sons

This textbook is written as a unified approach to various topics, ranging from drug discovery to manufacturing, techniques and technology, regulation and marketing. The key theme of the book is pharmaceuticals - what every student of pharmaceutical sciences should know: from the active pharmaceutical ingredients to the preparation of various dosage forms along with the relevant chemistry, this book makes pharmaceuticals relevant to undergraduate students of pharmacy and pharmaceutical sciences. This book explains how a particular drug was discovered and then converted from lab-scale to manufacturing scale, to the market. It explains the motivation for drug discovery, the reaction chemistry involved, experimental difficulties, various dosage forms and the reasoning behind them, mechanism of action, quality assurance and role of regulatory agencies. After having a course based on this book, the student will be able to understand: 1) the career prospects in the pharmaceutical industry, 2) the need for interdisciplinary teamwork in science, 3) the techniques and technology involved in making pharmaceuticals starting from bulk drugs, and 4) different dosage forms and critical factors in the development of pharmaceutical formulations in relation to the principles of chemistry. A few blockbuster drugs including atorvastatin, sildanefil, ranitidine, ciprofloxacin, amoxicillin, and the longest serving drugs such as aspirin and paracetamol are discussed in detail. Finally, the book also covers the important current pharmaceutical issues like quality control, safety, counterfeiting and abuse of drugs, and future prospects for pharmaceutical industry. Unified approach explaining drug discovery, bulk drug manufacturing, formulation of dosage forms, with pharmacological and therapeutic actions. Manufacturing processes of representative active pharmaceutical ingredients and their chemistry plus formulation of dosage forms presented in this book are based on actual industrial processes. Covers many aspects relevant to students of the pharmaceutical sciences or newly employed pharmaceutical researchers/employees. It contains summary information about regulatory agencies of different countries.

A Primer for Pharmaceutical Scientists CRC Press

"... this text takes a novel approach... The style... is not as dry as other statistics texts, and so should not be intimidating even to a relative newcomer to the subject... The layout is easy to navigate, there are chapter aims, summaries and "key point boxes" throughout." -The Pharmaceutical Journal, 2008 This text is a clear, accessible introduction to the key statistical techniques employed for the analysis of data within this subject area. Written in a concise and logical manner, the book explains why statistics are necessary and discusses the issues that experimentalists need to consider. The reader is carefully taken through the whole process, from planning an experiment to interpreting the results, avoiding unnecessary calculation methodology. The most commonly used statistical methods are described in terms of their purpose, when they should be used and what they mean once they have been performed. Numerous examples are provided throughout the text, all within a pharmaceutical context, with key points highlighted in summary boxes to aid student understanding. Essential Statistics for the Pharmaceutical Sciences takes a new and innovative approach to statistics with an informal style that will appeal to the reader who finds statistics a challenge! This book is an invaluable introduction to statistics for any science student. It is an essential text for students taking biomedical or pharmaceutical-based science degrees and also a useful guide for researchers.

Introduction to Pharmaceutical Chemical Analysis Elsevier

Provides a concise yet detailed resource covering all aspects of pharmaceuticals, from the scientific fundamentals to the dosage forms and drug delivery systems to drug product analyses. Assists with integrating the science of pharmacy into practice. Chapters from the original parent text Remington: The Science and Practice of Pharmacy 22nd edition were specifically selected to create this new edition. The text pulls heavily from the Pharmaceuticals and Pharmaceutical Dosage Forms sections. Various delivery systems and dosage forms are covered as well as parenterals, sterilization processes, and sterile compounding. One chapter addresses pharmaceutical excipients and another discusses pharmaceutical packaging. Pharmaceutical analysis, product characterization, quality control, stability, bioavailability, and dissolution are also covered. Fundamental scientific concepts including thermodynamics, ionic solutions and electrolyte equilibria, tonicity, chemical kinetics, rheology, complex formation and interfacial phenomenon are presented. The text also provides an introduction to pharmacokinetics and pharmacodynamics and the principles of absorption, distribution, metabolism and excretion. In addition, some introductory concepts on drug discovery and drug product approval as well as information resources in pharmacy and the pharmaceutical sciences are presented.

Essentials of Pharmaceuticals John Wiley & Sons

This unique textbook provides an introductory, yet comprehensive overview of the pharmaceutical sciences. It is the first text of its kind to pursue an interdisciplinary approach in this area of study. Readers are introduced to basic concepts related to the specific disciplines in the pharmaceutical sciences, including pharmacology, pharmaceuticals, pharmacokinetics, and medicinal chemistry. In an easy-to-read writing style, the book provides

readers with up-to-date information on pharmacogenomics and includes comprehensive coverage of industrial drug development and regulatory approval processes. Each chapter includes chapter outlines and critical-thinking exercises, as well as numerous tables and graphs. More than 160 illustrations complement the text.

Physicochemical Principles John Wiley & Sons

Pharmaceutics is one of the most diverse subject areas in all of pharmaceutical science. In brief, it is concerned with the scientific and technological aspects of the design and manufacture of dosage forms or medicines. An understanding of pharmaceutics is therefore vital for all pharmacists and those pharmaceutical scientists who are involved with converting a drug or a potential drug into a medicine that can be delivered safely, effectively and conveniently to the patient. Now in its fourth edition, this best-selling textbook in pharmaceutics has been brought completely up to date to reflect the rapid advances in delivery methodologies by eye and injection, advances in drug formulations and delivery methods for special groups (such as children and the elderly), nanomedicine, and pharmacognosy. At the same time the editors have striven to maintain the accessibility of the text for students of pharmacy, preserving the balance between being a suitably pitched introductory text and a clear reflection of the state of the art. provides a logical, comprehensive account of drug design and manufacture includes the science of formulation and drug delivery designed and written for newcomers to the design of dosage forms New to this edition New editor: Kevin Taylor, Professor of Clinical Pharmaceutics, School of Pharmacy, University of London. Twenty-two new contributors. Six new chapters covering parenteral and ocular delivery; design and administration of medicines for the children and elderly; the latest in plant medicines; nanotechnology and nanomedicines, and the delivery of biopharmaceuticals. Thoroughly revised and updated throughout.

An Integrated Approach Academic Press

This first monograph in the new AAPS book series concisely reviews important aspects of powder and particle systems and the critical quality attributes that should be used as a guide to future developments intended to maximize the control of product quality and performance. Drs. Hickey and Giovagnoli have written an essential primer for any scientists involved in powder or particle research and manufacturing. It is appropriate for those just entering the field or as a rapid reference for the experienced pharmaceutical scientist. The authors have both academic and industrial experience and the coverage includes solid state chemistry; crystallization; physical processes; particle size and distribution; particle interaction; manufacturing processes; quality by design; and a general discussion of the industry. Pharmaceutical Powder and Particles is intended to concisely review important aspects of powder and particle systems and the critical quality attributes that should be used as a guide to future developments intended to maximize the control of product quality and performance.

Introduction to Pharmaceutical Analytical Chemistry John Wiley & Sons

New edition of successful standard reference book for the pharmaceutical industry and pharmaceutical physicians! The Textbook of Pharmaceutical Medicine is the coursebook for the Diploma in Pharmaceutical Medicine, and is used as a standard reference throughout the pharmaceutical industry. The new edition includes greater coverage of good clinical practice, a completely revised statistics chapter, and more on safety. Covers the course information for the Diploma in Pharmaceutical Medicine Fully updated, with new authors Greater coverage of good clinical practice and safety New chapters on regulation of medical devices in Europe and regulation of therapeutic products in Australia

Computational Pharmaceutics Academic Press

HPLC for Pharmaceutical Scientists is an excellent book for both novice and experienced pharmaceutical chemists who regularly use HPLC as an analytical tool to solve challenging problems in the pharmaceutical industry. It provides a unified approach to HPLC with an equal and balanced treatment of the theory and practice of HPLC in the pharmaceutical industry. In-depth discussion of retention processes, modern HPLC separation theory, properties of stationary phases and columns are well blended with the practical aspects of fast and effective method development and method validation. Practical and pragmatic approaches and actual examples of effective development of selective and rugged HPLC methods from a physico-chemical point of view are provided. This book elucidates the role of HPLC throughout the entire drug development process from drug candidate inception to marketed drug product and gives detailed specifics of HPLC application in each stage of drug development. The latest advancements and trends in hyphenated and specialized HPLC techniques (LC-MS, LC-NMR, Preparative HPLC, High temperature HPLC, high pressure liquid chromatography) are also discussed.

Aulton's Pharmaceutics CRC Press

Drug Stability for Pharmaceutical Scientists is a clear and easy-to-follow guide on drug degradation in pharmaceutical formulation. This book features valuable content on both aqueous and solid drug solutions, the stability of proteins and peptides, acid-base catalyzed and solvent catalyzed reactions, how drug formulation can influence drug stability, the influence of external factors on reaction rates and much more. Full of examples of real-life formulation problems and step-by-step calculations, this book is the ideal resource for graduate students, as well as scientists in the pharmaceutical and related industries. Illustrates important theoretical concepts with numerous examples, figures, calculations, learning problems and questions for self-study and retention of material Provides answers and explanations to test your knowledge Enables you to better understand key concepts such as rate and order of reaction, reaction equilibrium, complex reaction mechanisms and more Includes an in-depth discussion of both aqueous and solid drug solutions and contains the latest international regulatory requirements on drug stability

Modern Pharmaceutics Volume 1 CRC Press

The definitive textbook on the chemical analysis of pharmaceutical drugs – fully revised and updated Introduction to Pharmaceutical Analytical Chemistry enables students to gain fundamental knowledge of the vital concepts, techniques and applications of the chemical analysis of pharmaceutical ingredients, final pharmaceutical products and drug substances in biological fluids. A unique emphasis on pharmaceutical laboratory practices, such as sample preparation and separation techniques, provides an efficient and practical educational framework for undergraduate studies in areas such as pharmaceutical sciences, analytical chemistry and forensic analysis. Suitable for foundational courses, this essential undergraduate text introduces the common analytical methods used in quantitative and qualitative chemical analysis of pharmaceuticals. This extensively revised second edition includes a new chapter on chemical analysis of biopharmaceuticals, which includes discussions on identification, purity testing and assay of peptide and protein-based formulations. Also new to this edition are improved colour illustrations and tables, a streamlined chapter structure and text revised for increased clarity and comprehension. Introduces the fundamental concepts of pharmaceutical analytical chemistry and statistics Presents a systematic investigation of pharmaceutical applications absent from other textbooks on the subject Examines various analytical techniques commonly used in pharmaceutical laboratories Provides practice problems, up-to-date practical examples and detailed illustrations Includes updated content aligned with the current European and United States Pharmacopeia regulations and guidelines Covering the analytical techniques and concepts necessary for pharmaceutical analytical chemistry, Introduction to Pharmaceutical Analytical Chemistry is ideally suited for students of chemical and pharmaceutical sciences as well as analytical chemists transitioning into the field of pharmaceutical analytical chemistry.