A Novel Usp Apparatus 4 Based Release Testing Method For

SINGH JOEL

Natural and Synthetic Biomedical Polymers DIWAKAR EDUCATION HUB
Issues in Pharmacology, Pharmacy, Drug Research, and Drug Innovation: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Pharmacology, Pharmacy, Drug Research, and Drug Innovation. The editors have built Issues in Pharmacology, Pharmacy, Drug Research, and Drug Innovation: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Pharmacology, Pharmacy, Drug Research, and Drug Innovation in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Pharmacology, Pharmacy, Drug Research, and Drug Innovation: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.
Year Book of the American Pharmaceutical Association BoD – Books on Demand
Lipid Nanocarriers for Drug Targeting presents recent advances in the area of lipid nanocarriers. The book focuses on cationic lipid nanocarriers, solid lipid nanocarriers, liposomes, thermosensitive vesicles, and cubosomes, with applications in phototherapy, cosmetic and others. As the first book related to lipid nanocarriers and their direct implication in pharmaceutical nanotechnology, this important reference resource is ideal for biomaterials scientists and those working in the medical and pharmaceutical industries that want to learn more on how lipids can be used to create more effective drug delivery systems. Highlights the most commonly used types of lipid nanocarriers and explains how they are applied in pharmacy Shows how lipid nanocarriers are used in different types of treatment, including oral medicine, skin repair and cancer treatment Assesses the pros and cons of using different lipid nanocarriers for different therapies
Specialty Dosage Forms CRC Press
The Chapter Answer Book will provide a balance of both formal requirements of the USP chapter as well as practical advice and consideration in complying with the chapter. The reader will be able to follow a nonsterile product from receipt to preparation in a healthcare facility, addressing core elements of the USP chapter. The standards outlined in this chapter include: Facility design specification Personnel training and core competencies Suggested approaches for documenting competency Work practices to meet requirements and best practices Guidelines, procedures, and compliance requirements for compounding nonsterile preparations Compounding quality nonsterile preparations Beyond use dating guidance and training And much more… Author Patricia Kienle is a known authority on sterile compounding. She currently serves as a member of the USP Compounding Expert Committee and was Chair of the subcommittee and Expert Panel that developed USP as a guide for practical advice and explanation to help ensure compliance with the requirements of USP .
NMR and MRI of Gels Springer
Organic Materials as Smart Nanocarriers for Drug Delivery presents the latest developments in the area of organic frameworks used in pharmaceutical nanotechnology. An up-to-date overview of organic smart nanocarriers is explored, along with the different types of nanocarriers, including polymeric micelles, cyclodextrins, hydrogels, lipid nanoparticles and nanoemlusions. Written by a diverse range of international academics, this book is a valuable reference for researchers in biomaterials, the pharmaceutical industry, and those who want to learn more about the current applications of organic smart nanocarriers. Explores the most recent molecular- and structure-based applications of organic smart nanocarriers in drug delivery Highlights different smart nanocarriers and assesses their intricate organic structural properties for improving drug delivery Assesses how molecular organic frameworks lead to more effective drug delivery systems
Hand Book of Pharmacy and Therapeutics CRC Press
Lipid-Based Nanocarriers for Drug Delivery and Diagnosis explores the present state of widely used lipid-based nanoparticulate delivery systems, such as solid lipid nanoparticles (SLN), nanostructured lipid carriers (NLC), nanoliposomes, micelles, nanoemulsions, nanosuspensions and lipid nanotubes. The various types of lipids that can be exploited for drug delivery and their chemical composition and physicochemical characteristics are reviewed in detail, along with their characterization aspects and effects of their dimensions on drug delivery systems behavior in-vitro and in-vivo. The book covers the effective utilization of these lipids based systems for controlled and targeted delivery of potential drugs/genes for enhanced clinical efficacy. Provides the present state of widely used lipid-based nanoparticulate delivery systems Explores how lipid-based nanocarriers improve drug delivery safety Describes the nanoformulation design and the preparation methods of lipid-based nanocarriers
Specification of Drug Substances and Products ASHP
This book is the first text to provide a comprehensive assessment of the application of fundamental principles of dissolution and drug release testing to poorly soluble compounds and formulations. Such drug products are, vis-à-vis their physical and chemical properties, inherently incompatible with aqueous dissolution. However, dissolution methods are required for product development and selection, as well as for the fulfillment of regulatory obligations with respect to biopharmaceutical assessment and product quality understanding. The percentage of poorly soluble drugs, defined in classes 2 and 4 of the Biopharmaceutics Classification System (BCS), has significantly increased in the modern pharmaceutical development pipeline. This book provides a thorough exposition of general method development strategies for such drugs, including instrumentation and media selection, the use of compendial and non-compendial techniques in product development, and phase-appropriate approaches to dissolution development. Emerging topics in the field of dissolution are also discussed, including biorelevant and biphasic dissolution, the use on enzymes in dissolution testing, dissolution of suspensions, and drug release of non-oral products. Of particular interest to the industrial pharmaceutical professional, a brief overview of the formulation and solubilization techniques employed in the development of BCS class 2 and 4 drugs to overcome solubility challenges is provided and is complemented by a collection of chapters that survey the approaches and considerations in developing dissolution methodologies for enabling drug delivery technologies, including nanosuspensions, lipid-based formulations, and stabilized amorphous drug formulations.
Advanced Molecularly Imprinting Materials CRC Press
Polymers are important and attractive biomaterials for researchers and clinical applications due to the ease of tailoring their chemical, physical and biological properties for target devices. Due to this versatility they are rapidly replacing other classes of biomaterials such as ceramics or metals. As a result, the demand for biomedical polymers has grown exponentially and supports a diverse and highly monetized research community. Currently worth $1.2bn in 2009 (up from $650m in 2000), biomedical polymers are expected to achieve a CAGR of 9.8% until 2015, supporting a current research community of approximately 28,000+. Summarizing the main advances in biopolymer development of the last decades, this work systematically covers both the physical science and biomedical engineering of the multidisciplinary field. Coverage extends across synthesis, characterization, design consideration and biomedical applications. The work supports scientists researching

the formulation of novel polymers with desirable physical, chemical, biological, biomechanical and degradation properties for specific targeted biomedical applications. Combines chemistry, biology and engineering for expert and appropriate integration of design and engineering of polymeric biomaterials Physical, chemical, biological, biomechanical and degradation properties alongside currently deployed clinical applications of specific biomaterials aids use as single source reference on field. 15+ case studies provides in-depth analysis of currently used polymeric biomaterials, aiding design considerations for the future

Polymeric Nanomaterials in Nanotherapeutics CRC Press
This contribution book collects reviews and original articles from eminent experts working in the interdisciplinary arena of novel drug delivery systems and their uses. From their direct and recent experience, the readers can achieve a wide vision on the new and ongoing potentialities of different drug delivery systems. Since the advent of analytical techniques and capabilities to measure particle sizes in nanometer ranges, there has been tremendous interest in the use of nanoparticles for more efficient methods of drug delivery. On the other hand, this reference discusses advances in the design, optimization, and adaptation of gene delivery systems for the treatment of cancer, cardiovascular, pulmonary, genetic, and infectious diseases, and considers assessment and review procedures involved in the development of gene-based pharmaceuticals.

In Vitro-In Vivo Correlations CRC Press
Recent Advances in Analytical Techniques is a series of updates in techniques used in chemical analysis. Each volume presents information about a selection of analytical techniques. Readers will find information about developments in analytical methods such as chromatography, electrochemistry, optical sensor arrays for pharmaceutical and biomedical analysis. Novel Developments in Pharmaceutical and Biomedical Analysis is the second volume of the series and covers the following topics: o Chromatographic assays of solid dosage forms and their drug dissolution studies o UHPLC method for the estimation of bioactive compounds o HILIC based LC/MS for metabolite analysis o In vitro methods for the evaluation of oxidative stress o Application of vibrational spectroscopy in studies of structural polymorphism of drugs o Electrochemical sensors based on conductive polymers and carbon nanotubes o Optical sensor arrays for pharmaceutical and biomedical analyses o Chemical applications of ionic liquids o New trends in enantioanalysis of pharmaceutical compounds.

Lipid-Based Nanocarriers for Drug Delivery and Diagnosis 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. 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. 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.

From Fundamentals to Industrial Practice William Andrew
The rise of bio- and nano-technology in the last decades has led to the emergence of a new and unique type of medicine known as non-biological complex drugs (NBCDs). This book illustrates the challenges associated with NBCD development, as well as the complexity of assessing the effects of manufacturing changes on innovator and follow-on batches of NBCDs. It also touches upon proven marketing authorization requirements for biosimilars that could be effective in evaluating follow-on NBCDs, including a demonstration of control over the manufacturing process and a need for detailed physico-chemical characterization and (pre)clinical tests. This book is meant to be used for years to come as a standard reference work for the development of NBCDs. Moreover, this book aims to stimulate discussions and further our thinking to ensure that decisions regarding the approval of complex drugs are made with relevant scientific data on the table.

Formulation and Analytical Development for Low-Dose Oral Drug Products William Andrew
This book represents the invited presentations and some of the posters presented at the conference entitled "In Vitro-In Vivo Relationship (IVIVR) Workshop" held in Sep tember, 1996. The workshop was organized by the IVIVR Cooperative Working Group which has drawn together scientists from a number of organizations and institutions, both academic and industrial. In addition to Elan Corporation, which is a drug delivery com pany specializing in the development of ER (Extended Release) dosage forms, the IVIVR Cooperative Working Group consists of collaborators from the University of Maryland at Baltimore, University College Dublin, Trinity College Dublin, and the University of Not tingham in the UK. The principal collaborators are: Dr. Jackie Butler, Elan Corporation Prof. Owen Corrigan, Trinity College Dublin Dr. lain Cumming, Elan Corporation Dr. John Devane, Elan Corporation Dr. Adrian Dunne, University College Dublin Dr. Stuart Madden, Elan Corporation Dr. Colin Melia, University of Nottingham Mr. Tom O'Hara, Elan Corporation Dr. Deborah Piscitelli, University of Maryland at Baltimore Dr. Araz Raoof, Elan Corporation Mr. Paul Stark, Elan Corporation Dr. David Young, University of Maryland at Baltimore The purpose of the workshop was to discuss new concepts and methods in the devel opment of in vitro-in vivo relationships for ER products. The original idea went back ap proximately 15 months prior to the workshop itself. For some time, the principal collaborators had been working together on various aspects of dosage form development.

Aulton's Pharmaceutics E-Book Elsevier Health Sciences
Guides readers on the proper use of in vitro drug release methodologies in order to evaluate the performance of special dosage forms In the last decade, the application of drug release testing has widened to a variety of novel/special dosage forms. In order to predict the in vivo behavior of such dosage forms, the design and development of the in vitro test methods need to take into account various aspects, including the dosage form design and the conditions at the site of application and the site of drug release. This unique book is the first to cover the field of in vitro release testing of special dosage forms in one volume. Featuring contributions from an international team of experts, it presents the state of the art of the use of in vitro drug release methodologies for assessing special dosage forms' performances and describes the different techniques required for each one. In Vitro Drug Release Testing of Special Dosage Forms covers the in vitro release testing of: lipid based oral formulations; chewable oral drug products; injectables; drug eluting stents; inhalation products; transdermal formulations; topical formulations; vaginal and rectal delivery systems and ophthalmics. The book concludes with a look at regulatory aspects. Covers both oral and non-oral dosage forms Describes current regulatory conditions for in vitro drug release testing Features contributions from well respected global experts in dissolution testing In Vitro Drug Release Testing of Special Dosage Forms will find a place on the bookshelves of anyone working with special dosage forms, dissolution testing, drug formulation and delivery, pharmaceutics, and regulatory affairs.

Pharmaceutics [GPAT] – Books [Study Notes] 7 in 1 Books with 2500+ Question Answer As Per Updated Syllabus John Wiley & Sons
Development of In Vitro Release Testing Methods for Modified Release Parenterals and Correlation with In Vivo PerformanceNatural and Synthetic Biomedical PolymersNewnes

Theory and Practice of Physical Pharmacy - E-Book Newnes
Guides readers on the proper use of in vitro drug release methodologies in order to evaluate the performance of special dosage forms In the last decade, the application of drug release testing has widened to a variety of novel/special dosage forms. In order to predict the in vivo behavior of such dosage forms, the design and development of the in vitro test methods need to take into account various aspects, including the dosage form design and the conditions at the site of application and the site of drug release. This unique book is the first to cover the field of in vitro release testing of special dosage forms in one volume. Featuring contributions from an international team of experts, it presents the state of the art of the use of in vitro drug release methodologies for assessing special dosage forms' performances and describes the different techniques required for each one. In Vitro Drug Release Testing of Special Dosage Forms covers the in vitro release testing of: lipid based oral formulations; chewable oral drug products; injectables; drug eluting stents; inhalation products; transdermal formulations; topical formulations; vaginal and rectal delivery systems and ophthalmics. The book concludes with a look at regulatory aspects. Covers both oral and non-oral dosage forms Describes current regulatory conditions for in vitro drug release testing Features contributions from well respected global experts in dissolution testing In Vitro Drug Release Testing of Special Dosage Forms will find a place on the bookshelves of anyone working with special dosage forms, dissolution testing, drug formulation and delivery, pharmaceutics, and regulatory affairs.

Containing the ... Annual Report on the Progress of Pharmacy, and the Constitution, By-laws and Roll of Members ... William Andrew
Written for practitioners in both the drug and biotechnology industries, the Handbook of Analytical Validation carefully compiles current regulatory requirements on the validation of new or modified analytical methods. Shedding light on method validation from a practical standpoint, the handbook: Contains practical, up-to-date guidelines for analytical method validation Summarizes the latest regulatory requirements for all aspects of method validation, even those coming from the USP, but undergoing modifications Covers development, optimization, validation, and transfer of many different types of methods used in the regulatory environment Simplifying the overall process of method development, optimization and validation, the guidelines in the Handbook apply to both small molecules in the conventional pharmaceutical industry, as well as well as the biotech industry.

Handbook of Analytical Validation Elsevier Health Sciences
Molecularly imprinted polymers (MIPs) are an important functional material because of their potential implications in diverse research fields. The materials have been developed for a range of uses including separation, environmental, biomedical and sensor applications. In this book, the chapters are clustered into two main sections: Strategies to be employed when using the affinity materials, and rational design of MIPs for advanced applications. In the first part, the book covers the recent advances in producing MIPs for sample design, preparation and characterizations. In the second part, the chapters demonstrate the importance and novelty of creation of recognition imprinted on the materials and surfaces for a range of microbial detection sensors in the biomedical, environmental and food safety fields as well as sensing human odor and virus monitoring systems. Part 1: Strategies of affinity materials Molecularly imprinted polymers MIP nanomaterials Micro- and nanotraps for solid phase extraction Carbonaceous affinity nanomaterials Fluorescent MIPs MIP-based fiber optic sensors Part 2: Rational design of MIP for advanced applications MIP-based biomedical and environmental sensors Affinity adsorbents for environmental biotechnology MIP in food safety MIP-based virus monitoring MIP-based drug delivery and controlled release Biorecognition imprints on the biosensor surfaces MIP-based sensing of volatile organic compounds in human body odour MIP-based microcantilever sensor system

Issues in Pharmacology, Pharmacy, Drug Research, and Drug Innovation: 2011 Edition Elsevier Health Sciences
Gels are used in a large variety of commercial and scientific products from drug delivery systems and food science to biomedical sensors. They also are invaluable in MRI physics research where they mimic biological tissue and in radiotherapy quality assurance where they are used to capture the three dimensional radiation dose distribution. This unique book discusses the state-of-the-art of NMR and MRI techniques in studying the physics and chemistry of gel systems, in their application as MRI phantoms and as three dimensional radiation dosimeters. The first part of the book will cover the fundamental physical concepts of gels and the NMR techniques to study gel systems. The second part is dedicated to the application of gels in the life sciences and in the medical practice to validate radiotherapy and new MRI techniques. Filling the gap in literature, this volume provides the scientific reader with an extensive overview of possible techniques and methods to study the interesting properties and applications of gels. For the MRI researcher and medical physicist, the book will be a valuable resource in using gel phantoms for validating contemporary MRI techniques and radiotherapy treatments.

Novel Developments in Pharmaceutical and Biomedical Analysis Springer Science & Business Media
This book covers the essentials of drug delivery research and provides a unique forum for scientific experimental methods that are exclusively focused by the in-vitro, ex-vivo, and in-vivo methodologies of drug delivery research and felicitates translational research. The book includes recent and novel approaches in evaluation methods of transdermal, nasal, ocular, oral and intraoral, gastro-retentive, colon-targeted, and brain-targeted drug delivery systems. Providing up to date and comprehensive information, this text is invaluable to students, teachers, scientists, and others employed in the field of drug delivery.

The Science and the Regulatory Landscape S. Chand Publishing
There are unique challenges in the formulation, manufacture, analytical chemistry, and regulatory requirements of low-dose drugs. This book provides an overview of this specialized field and combines formulation, analytical, and regulatory aspects of low-dose development into a single reference book. It describes analytical methodologies like dissolution testing, solid state NMR, Raman microscopy, and LC-MS and presents manufacturing techniques such as granulation, compaction, and compression. Complete with case studies and a discussion of regulatory requirements, this is a core reference for pharmaceutical scientists, regulators, and graduate students.