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KEY=BY - SANTOS JAQUAN

Handbook of Pharmaceutical Analysis by HPLC Elsevier High pressure liquid chromatography–frequently called high performance liquid chromatography (HPLC or, LC) is the premier analytical technique in pharmaceutical analysis and is predominantly used in the pharmaceutical industry. Written by selected experts in their respective fields, the Handbook of Pharmaceutical Analysis by HPLC Volume 6, provides a complete yet concise reference guide for utilizing the versatility of HPLC in drug development and quality control. Highlighting novel approaches in HPLC and the latest developments in hyphenated techniques, the book captures the essence of major pharmaceutical applications (assays, stability testing, impurity testing, dissolution testing, cleaning validation, high-throughput screening). A complete reference guide to HPLC Describes best practices in HPLC and offers 'tricks of the trade' in HPLC operation and method development Reviews key HPLC pharmaceutical applications and highlights currents trends in HPLC ancillary techniques, sample preparations, and data handling HPLC in the Pharmaceutical Industry CRC Press A practical guide for chemists in the pharmaceutical industry to making automated analyses of drugs that will meet the standards of regulatory agencies. Reviews the standard techniques of high-performance liquid chromatography, specialized detection methods, automation in pharmaceutical analysis, an HPLC for Pharmaceutical Scientists John Wiley & Sons 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. HPLC and UHPLC for Practicing Scientists John Wiley & Sons A concise yet comprehensive reference guide on HPLC/UHPLC that focuses on its fundamentals, latest developments, and best practices in the pharmaceutical and biotechnology industries Written for practitioners by an expert practitioner, this new edition of HPLC and UHPLC for Practicing Scientists adds numerous updates to its coverage of high-performance liquid chromatography, including comprehensive information on UHPLC (ultra-high-pressure liquid chromatography) and the continuing migration of HPLC to UHPLC, the modern standard platform. In addition to introducing readers to HPLC’s fundamentals, applications, and developments, the book describes basic theory and terminology for the novice, and reviews relevant concepts, best practices, and modern trends for the experienced practitioner. HPLC and UHPLC for Practicing Scientists, Second Edition offers three new chapters. One is a standalone chapter on UHPLC, covering concepts, benefits, practices, and potential issues. Another examines liquid chromatography/mass spectrometry (LC/MS). The third reviews at the analysis of recombinant biologics, particularly monoclonal antibodies (mAbs), used as therapeutics. While all chapters are revised in the new edition, five chapters are essentially rewritten (HPLC columns, instrumentation, pharmaceutical analysis, method development, and regulatory aspects). The book also includes problem and answer sections at the end of each chapter. Overviews fundamentals of HPLC to UHPLC, including theories, columns, and instruments with an abundance of tables, figures, and key references Features brand new chapters on UHPLC, LC/MS, and analysis of recombinant biologics Presents updated information on the best practices in method development, validation, operation, troubleshooting, and maintaining regulatory compliance for both HPLC and UHPLC Contains major revisions to all chapters of the first edition and substantial rewrites of chapters on HPLC columns, instrumentation, pharmaceutical analysis, method development, and regulatory aspects Includes end-of-chapter quizzes as assessment and learning aids Offers a reference guide to graduate students and practicing scientists in pharmaceutical, biotechnology, and other industries Filled with intuitive explanations, case studies, and clear figures, HPLC and UHPLC for Practicing Scientists, Second Edition is an essential resource for practitioners of all levels who need to understand and utilize this versatile analytical technology. It will be a great benefit to every busy laboratory analyst and researcher. Bioanalysis of Pharmaceuticals Sample Preparation, Separation Techniques and Mass Spectrometry John Wiley & Sons Bioanalysis of Pharmaceuticals: Sample Preparation, Separation Techniques and Mass Spectrometry is the first student textbook on the separation science and mass spectrometry of pharmaceuticals present in biological fluids with an educational presentation of the principles, concepts and applications. It discusses the chemical structures and properties of low- and high-molecular drug substances; the different types of biological samples and fluids that are used; how to prepare the samples by extraction, and how to perform the appropriate analytical measurements by chromatographic and mass spectrometric methods. Bioanalysis of Pharmaceuticals: Sample Preparation, Separation Techniques and Mass Spectrometry: Is an introductory student textbook discussing the different principles and concepts clearly and comprehensively, with many relevant and educational examples Focuses on substances that are administered as human drugs, including low-molecular drug substances, peptides, and proteins Presents both the basic principles that are regularly taught in universities, along with the practical use of bioanalysis as carried out by researchers in the pharmaceutical industry and in hospital laboratories Is aimed at undergraduate students, scientists, technicians and researchers in industry working in the areas of pharmaceutical analyses, biopharmaceutical analyses, biological and life sciences The book includes multiple examples to illustrate the theory and application, with many practical aspects including calculations, thus helping the student to learn how to convert the data recorded by instruments into the real concentration of the drug substances within the biological sample. Modern HPLC for Practicing Scientists John Wiley & Sons A comprehesive yet concise guide to Modern HPLC Written for practitioners by a practitioner, Modern HPLC for Practicing Scientists is a concise text which presents the most important High-Performance Liquid Chromatography (HPLC) fundamentals, applications, and developments. It describes basic theory and terminology for the novice, and reviews relevant concepts, best practices, and modern trends for the experienced practitioner. Moreover, the book serves well as an updated reference guide for busy laboratory analysts and researchers. Topics covered include: HPLC operation Method development Maintenance and troubleshooting Modern trends in HPLC such as quick-turnaround and "greener" methods Regulatory aspects While broad in scope, this book focuses particularly on reversed-phase HPLC, the most common separation mode, and on applications for the pharmaceutical industry, the largest user segment. Accessible to both novice and intermedate HPLC users, information is delivered in a straightforward manner illustrated with an abundance of diagrams, chromatograms, tables, and case studies, and supported with selected key references and Web resources. With intuitive explanations and clear figures, Modern HPLC for Practicing Scientists is an essential resource for practitioners of all levels who need to understand and utilize this versatile analytical technology. Method Validation in Pharmaceutical Analysis A Guide to Best Practice John Wiley & Sons Adopting a practical approach, the authors provide a detailed interpretation of the existing regulations (GMP, ICH), while also discussing the appropriate calculations, parameters and tests. The book thus allows readers to validate the analysis of pharmaceutical compounds while complying with both the regulations as well as the industry demands for robustness and cost effectiveness. Following an introduction to the basic parameters and tests in pharmaceutical validation, including specificity, linearity, range, precision, accuracy, detection and quantitation limits, the text focuses on a life-cycle approach to validation and the integration of validation into the whole analytical quality assurance system. The whole is rounded off with a look at future trends. With its first-hand knowledge of the industry as well as regulating bodies, this is an invaluable reference for analytical chemists, the pharmaceutical industry, pharmaceutists, QA officers, and public authorities. HPLC Methods for Clinical Pharmaceutical Analysis John Wiley & Sons Filling a gap in the literature for a hands-on guide focusing on everyday laboratory challenges, this English edition has been expanded and revised using the feedback received on the successful German precursor. Throughout the book, Professor Mascher draws on his 30 years of experience and provides abundant practical advice, troubleshooting and other hints highlighted in boxes, as well as a broad selection of walkthrough case studies. Based on a course taught by the author, the first part of the book intuitively explains all steps of routine bioanalysis and explains how to set up a robust, inexpensive and effi cient method for a given substance. In the second part he includes 20 worked example cases that highlight common challenges and how to overcome them. With its appendix containing tried-and-tested analytical methods for 100 clinically relevant substances from the author`s own laboratory, complete with spectral and MS data as well as literature references and basic pharmacokinetic information, this is a life-long companion for everyone working in clinical, pharmaceutical and biochemical analysis. Comments to the German book: "The book comes to life through its examples, showing not only what did work in the author's laboratory, but also what didn't." ChemieReport "Indispensable for novices, while even old hands will be able to expand their knowledge. A collection of analytical data for ca. 100 substances completes the book's offering, leaving almost nothing to be desired." pharmind Introduction to Pharmaceutical Chemical Analysis John Wiley & Sons 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 HPLC Methods for Recently Approved Pharmaceuticals John Wiley & Sons An indispensable resource for busy researchers Your time is valuable-too valuable to spend hunting through thetechnical literature in search of the right HPLC assay techniquesfor your projects. With HPLC Methods for Recently ApprovedPharmaceuticals, you'll quickly

identify and replicate the idealprocedures for your project needs, without having to refer tooriginal source publications. More of your time can then be spentin the lab, not the library. Covering the relevant world literature through 2003, this bookpicks up where Dr. Lunn's acclaimed HPLC Methods for PharmaceuticalAnalysis left off. It arms you with established HPLC assaytechniques for hundreds of newly approved drugs, as well as drugsfor which assay methods were only recently developed. Combiningdetailed descriptions of procedures with specially annotatedreferences, this practical handbook gives you: * HPLC methods for 390 commonly prescribed pharmaceuticalcompounds * Various procedures for each drug listed together-making it easyto mix and match for customized approaches * Methods for drugs in biological fluids and for bulk andformulated drugs * Chemical structures, molecular weights and formulas, and CASRegistry Numbers * Cross-references to The Merck Index * Retention times of other drugs that can be assayed using the samemethods Chromatographic Analysis of Pharmaceuticals Routledge Updated and revised throughout. Second Edition explores the chromatographic methods used for the measurement of drugs, impurities, and excipients in pharmaceutical preparations--such as tablets, ointments, and injectables. Contains a 148-page table listing the chromatographic data of over 1300 drugs and related substances--including sample matrix analyzed, sample handling procedures, column packings, mobile phase, mode of detection, and more. Handbook of Pharmaceutical Analysis CRC Press Exploring the analysis of pharmaceuticals, including polymorphic forms, this book discusses regulatory requirements in pharmaceutical product development and pharmaceutical testing. It covers methods of drug separation and procedures such as capillary electrophoresis for chromatographic separation of molecules. Additional topics include drug formulation analysis using vibrational and magnetic resonance spectroscopy and identification of drug metabolites and decomposition products using such techniques as mass spectrometry. The book provides more than 300 tables, equations, drawings, and photographs, and convenient, easy-to-use indices, facilitating quick access to each topic. HPLC Method Development for Pharmaceuticals Elsevier High pressure, or high performance, liquid chromatography (HPLC) is the method of choice for checking purity of new drug candidates, monitoring changes during scale up or revision of synthetic procedures, evaluating new formulations, and running control/assurance of the final drug product. HPLC Method Development for Pharmaceuticals provides an extensive overview of modern HPLC method development that addresses these unique concerns. Includes a review and update of the current state of the art and science of HPLC, including theory, modes of HPLC, column chemistry, retention mechanisms, chiral separations, modern instrumentation (including ultrahigh-pressure systems), and sample preparation. Emphasis has been placed on implementation in a pharmaceutical setting and on providing a practical perspective. HPLC Method Development for Pharmaceuticals is intended to be particularly useful for both novice and experienced HPLC method development chemists in the pharmaceutical industry and for managers who are seeking to update their knowledge. Covers the requirements for HPLC in a pharmaceutical setting including strategies for software and hardware validation to allow for use in a regulated laboratory Provides an overview of the pharmaceutical development process (clinical phases, chemical and pharmaceutical development activities) Discusses how HPLC is used in each phase of pharmaceutical development and how methods are developed to support activities in each phase Analytical Method Validation and Instrument Performance Verification John Wiley & Sons Validation describes the procedures used to analyze pharmaceutical products so that the data generated will comply with the requirements of regulatory bodies of the US, Canada, Europe and Japan. Calibration of Instruments describes the process of fixing, checking or correcting the graduations of instruments so that they comply with those regulatory bodies. This book provides a thorough explanation of both the fundamental and practical aspects of biopharmaceutical and bioanalytical methods validation. It teaches the proper procedures for using the tools and analysis methods in a regulated lab setting. Readers will learn the appropriate procedures for calibration of laboratory instrumentation and validation of analytical methods of analysis. These procedures must be executed properly in all regulated laboratories, including pharmaceutical and biopharmaceutical laboratories, clinical testing laboratories (hospitals, medical offices) and in food and cosmetic testing laboratories. Pharmaceutical Drug Analysis New Age International About the Book: During the past two decades, there have been magnificent and significant advances in both analytical instrumentation and computerized data handling devices across the globe. In this specific context the remarkable proliferation of windows Pharmaceutical and Biomedical Applications of Liquid Chromatography Newnes This volume reflects the changes that have taken place in the pharmaceutical industry over the last ten years, most notably the increased importance attached to the question of chirality, the growing influence of biotechnology and the need for more rigorous documentation and validation of analytical methods and procedures. The first part of this book deals with the application of new technology to pharmaceutical and biomedical analysis, reflecting the present needs for increased speed, sensitivity and selectivity in the analysis of drugs. The second chapter provides an overview of capillary electophoresis, which represents one of the most inportant analytical developments to impact directly on pharmaceutical development in recent years. Although not a chromatographic technique, capillary electrophoresis was considered too important to be ignored. Over the last 25 years, liquid chromatography has grown into a mature analytical technique and many of the fundamental issues concerned with retention and separation are well defined. The practitioners of modern liquid chromatography spend as much time in the development of techniques for sampling handling and automation as they do in the development of the separation. Therefore, Part Two of this book describes some of the recent advances in the areas of sample handling and the isolation of compounds from biological samples, including solid phase extraction, restricted access media for direct injection, coupled column technology and microdialysis. Similarily, Part Three contains two chapters concerned with liquid chromatographic methods for the isolation of drug substances, peptides and proteins from other complex media. The pharmaceutical industry and the process of drug development are highly regulated and the increasing importance that the regulatory authorities attach to validation has had a significant impact on the analytical techniques used for the analysis of drugs. Although this has increased the workload of analysts in the pharmaceutical industry, it has also improved the quality of analytical methods used in the support of investigational and new drug applications as well as the quality of methods published more recently in the literature. Consequently, Part Four of this volume describes approaches to the optimization and validation of liquid chromatography methods for the analysis of drugs in the bulk form, in pharmaceutical formulations and biological fluids. Modern HPLC for Practicing Scientists John Wiley & Sons A comprehesive yet concise guide to Modern HPLC Written for practitioners by a practitioner, Modern HPLC forPracticing Scientists is a concise text which presents the mostimportant High-Performance Liquid Chromatography (HPLC)fundamentals, applications, and developments. It describes basictheory and terminology for the novice, and reviews relevantconcepts, best practices, and modern trends for the experiencedpractitioner. Moreover, the book serves well as an updatedreference guide for busy laboratory analysts and researchers. Topics covered include: HPLC operation Method development Maintenance and troubleshooting Modern trends in HPLC such as quick-turnaround and "greener"methods Regulatory aspects While broad in scope, this book focuses particularly onreversed-phase HPLC, the most common separation mode, and onapplications for the pharmaceutical industry, the largest usersegment. Accessible to both novice and intermedate HPLC users,information is delivered in a straightforward manner illustratedwith an abundance of diagrams, chromatograms, tables, and casestudies, and supported with selected key references and Webresources. With intuitive explanations and clear figures, Modern HPLC forPracticing Scientists is an essential resource for practitioners ofall levels who need to understand and utilize this versatileanalytical technology. Practical HPLC Method Development John Wiley & Sons This revision brings the reader completely up to date on the evolving methods associated with increasingly more complex sample types analyzed using high-performance liquid chromatography, or HPLC. The book also incorporates updated discussions of many of the fundamental components of HPLC systems and practical issues associated with the use of this analytical method. This edition includes new or expanded treatments of sample preparation, computer assisted method development, as well as biochemical samples, and chiral separations. Analytical Method Development and Validation CRC Press Describes analytical methods development, optimization and validation, and provides examples of successful methods development and validation in high-performance liquid chromatography (HPLC) areas. The text presents an overview of Food and Drug Administration (FDA)/International Conference on Harmonization (ICH) regulatory guidelines, compliance with validation requirements for regulatory agencies, and methods validation criteria stipulated by the US Pharmacopia, FDA and ICH. Handbook of Modern Pharmaceutical Analysis Academic Press Handbook of Modern Pharmaceutical Analysis, Second Edition, synthesizes the complex research and recent changes in the field, while covering the techniques and technology required for today's laboratories. The work integrates strategy, case studies, methodologies, and implications of new regulatory structures, providing complete coverage of quality assurance from the point of discovery to the point of use. Treats pharmaceutical analysis (PA) as an integral partner to the drug development process rather than as a service to it Covers method development, validation, selection, testing, modeling, and simulation studies combined with advanced exploration of assays, impurity testing, biomolecules, and chiral separations Features detailed coverage of QA, ethics, and regulatory guidance (quality by design, good manufacturing practice), as well as high-tech methodologies and technologies from "lab-on-a-chip" to LC-MS, LC-NMR, and LC-NMR-MS Pharmaceutical Analysis E-Book A Textbook for Pharmacy Students and Pharmaceutical Chemists Elsevier Health Sciences Pharmaceutical analysis determines the purity, concentration, active compounds, shelf life, rate of absorption in the body, identity, stability, rate of release etc. of a drug. Testing a pharmaceutical product involves a variety of chemical, physical and microbiological analyses. It is reckoned that over £10 billion is spent annually in the UK alone on pharmaceutical analysis, and the analytical processes described in this book are used in industries as diverse as food, beverages, cosmetics, detergents, metals, paints, water, agrochemicals, biotechnological products and pharmaceuticals. This is the key textbook in pharmaceutical analysis, now revised and updated for its fourth edition. Worked calculation examples Self-assessment Additional problems (self tests) Practical boxes Key points boxes New chapter on Biotech products. New chapter on electrochemical methods in diagnostics. Greatly extended chapter on molecular emission spectroscopy to accommodate developments and innovations in the area. Now on StudentConsult Guidance for the Validation of Analytical Methodology and Calibration of Equipment Used for Testing of Illicit Drugs in Seized Materials and Biological Specimens A Commitment to Quality and Continuous Improvement United Nations Publications The validation of analytical methods and the calibration of equipment are important aspects of quality assurance in the laboratory. This manual deals with both of these within the context of testing of illicit drugs in seized materials and biological specimens. It provides an introduction and practical guidance to national authorities and analysts in the implementation of method validation and verification, and also in the calibration/performance verification of laboratory instrumentation and equipment within their existing internal quality assurance programmes. The procedures described represent a synthesis of the experience of scientists from several reputable laboratories around the world. Introduction to Pharmaceutical Analytical Chemistry Wiley 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. HPLC of Polymers Springer Science & Business Media Polymers are mainly characterized by molar mass, chemical composition, functionality and architecture. The determination of the complex structure of polymers by chromatographic and spectroscopic methods is one of the major concerns of polymer analysis and characterization. This lab manual describes the experimental approach to the chromatographic analysis of polymers. Different chromatographic methods, their theoretical background, equipment, experimental procedures and applications are discussed. The book will enable polymer chemists, physicists and material scientists as well as students of macromolecular and analytical science to optimize chromatographic conditions for a specific separation problem. Special emphasis is given to the description of applications for homo- and copolymers and polymer blends. Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques John Wiley & Sons The first book devoted exclusively to a highly popular, relatively new detection technique Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques presents a comprehensive review of CAD theory, describes its advantages and limitations, and offers extremely well-informed recommendations for its practical use. Using numerous real-world examples based on contributors' professional experiences, it provides priceless insights into the actual and potential applications of CAD across a wide range of industries. Charged aerosol detection can be combined with a variety of separation techniques and in numerous configurations. While it has been widely adapted for an array of industrial and research applications with great success, it is still a relatively new technique, and its fundamental performance characteristics are not yet fully understood. This book is intended as a tool for scientists seeking to identify the most effective and efficient uses of charged aerosol detection for a given application. Moving naturally from basic to advanced topics, the author relates fundamental principles, practical uses, and applications across a range of industrial settings, including pharmaceuticals, petrochemicals, biotech, and more. Offers timely, authoritative coverage of the theory, experimental techniques, and end-user applications of charged aerosol detection Includes contributions from experts from various fields of applications who explore CAD's advantages over traditional HPLC techniques, as well its limitations Provides a current theoretical and practical understanding of CAD, derived from authorities on aerosol technology and separation sciences Features numerous real-world examples that help relate fundamental properties and general operational variables of CAD to its performance in a variety of conditions Charged Aerosol Detection for Liquid Chromatography and Related Separation Techniques is a valuable resource for scientists who use chromatographic techniques in academic research and across an array of industrial settings, including the biopharmaceutical, biotechnology, biofuel, chemical, environmental, and food and beverage industries, among others. NMR Spectroscopy in Pharmaceutical Analysis Elsevier For almost a decade, quantitative NMR spectroscopy (qNMR) has been established as valuable tool in drug analysis. In all disciplines, i. e. drug identification, impurity profiling and assay, qNMR can be utilized. Separation techniques such as high performance liquid chromatography, gas chromatography, super fluid chromatography and capillary electrophoresis techniques, govern the purity evaluation of drugs. However, these techniques are not always able to solve the analytical problems often resulting in insufficient methods. Nevertheless such methods find their way into international pharmacopoeias. Thus, the aim of the book is to describe the possibilities of qNMR in pharmaceutical analysis. Beside the introduction to the physical fundamentals and techniques the principles of the application in drug analysis are described: quality evaluation of drugs, polymer characterization, natural products and corresponding reference compounds, metabolism, and solid phase NMR spectroscopy for the characterization drug substances, e.g. the water content, polymorphism, and drug formulations, e.g. tablets, powders. This part is accompanied by more special chapters dealing with representative examples. They give more detailed information by means of concrete examples. Combines theory, techniques, and concrete applications—all of which closely resemble the laboratory experience Considers international pharmacopoeias, addressing the concern for licensing Features the work of academics and researchers, appealing to a broad readership Clinical Applications of Mass Spectrometry in Drug Analysis Methods and Protocols Humana Press This volume describes methods and protocols for a number of drugs and toxins in a stepwise manner. Chapters in the book cover a wide array of topics such as: quantitation of Flecainide, Mexiletine, Propafenone, and Amiodarone in Serum or Plasma; quantitation of total Buprenorphine and Norbuprenorphine in Meconium; quantitation or Carisoprodol and Meprobamate in Urine; and quantitation of Tricyclic Antidepressants in Serum. Each chapter contains a brief introduction to the topic, clinical utility of the analyte(s), and useful notes to help laboratorians easily reproduce the protocols discussed. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Authoritative and thorough, Clinical Applications of Mass Spectrometry in Drug Analysis: Methods and Protocols, is a great resource for laboratorians who are already using mass spectrometry or thinking of introducing this technology to their laboratories. Sethi's Hplc High Performance Liquid Chromatography: Quantitative Analysis Of Pharmaceutical Formulations, Vol. 3 (hb) Liquid Chromatography in Clinical Analysis Springer Science & Business Media Liquid Chromatography in Clinical Analysis Analysis of Pharmaceuticals by Capillary Electrophoresis Springer Science & Business Media Dieser erste Titel einer ganzen Serie von anwendungsbezogenen Handbüchern zur Kapillarelektrophorese beschäftigt sich mit der Analytik von pharmazeutischen Substanzen. Dabei werden verschiedene Techniken praxisnah erläutert. Jeder, der im Labor - ob wissenschaftlich oder praxisnah - mit der Analyse von oft chiralen Pharmazeutika konfrontiert ist, wird viele Hinweise und Tips für seine Arbeit finden.USP: Einzige Monographie zur Analyse von Pharmazeutika mit CE This book describes the current state of the art for the analysis of pharmaceuticals by capillary electrophoresis and contains several hundred references to specific applications and methods. The main purpose of the book is to present the application possibilities of CE an therefore tabulated application data are provided. Chapters of the book are devoted to providing details of individual application areas such as chiral analysis, determination of drug related impurities, determination of drug counter-ions, drug residue monitoring and main component assay. An introductory chapter provides theoretical background to CE an related techniques. A chapter is dedicated to capillary electrochromatography which highlights the importance this technique currently possesses. Successful regulatory acceptance of CE methods is also described. A comprehensive chapter covers method validation aspects. Other chapters include discrete areas such as the use of non-aqueous solvents, forensic applications of CE, the application of experimental designs, determination of drugs in biofluids, and the analysis of vitamins by CE. LC-MS in Drug Bioanalysis Springer Science & Business Media Clinical pharmacology plays an important role in today's medicine. Due to the high sensitivity, selectivity, and affordability of a mass spectrometer (MS), the high performance liquid chromatography – mass spectrometry (LC-MS) analytical technique is widely used in the determination of drugs in human biological matrixes for clinical pharmacology. Specifically, LC-MS is used to analyze: anticancer drugs antidementia drugs antidepressant drugs antiepileptic drugs antifundal drug antimicrobial drugs antipsychotic drugs antiretroviral drugs anxiolytic/hypnotic drugs cardiac drugs drugs for addiction immunosuppressant drugs mood stabilizer drugs This book will primarily cover the various methods of validation for LC-MS techniques and applications used in modern clinical pharmacology. Essentials in Modern HPLC Separations Newnes This book discusses in a systematic manner the role of separation in HPLC, the types and characteristics of stationary phases and of mobile phases used in this technique, as well as other factors influencing the separation. The selection process of stationary and mobile phase for a specific separation is described as related to the physico-chemical characteristics of the molecules to be separated and of their matrix. All these subjects are discussed from the point of view of the new developments in HPLC. The book also includes a part presenting the practice of modern HPLC as necessary for applications, particularly related to the analysis of pharmaceutical and biological samples, food and beverages, environmental samples, etc. Gives a clear presentation of notions and conceptsDiscusses key parameters in HPLC separationIncludes modern developments in HPLCDescribes interrelation between various HPLC features (solvent pressure, separation, detection)Includes a large number of references. LC-MS in Drug Analysis Methods and Protocols Humana Press Liquid-Chromatography-Mass-Spectrometry procedures have been shown to be successful when applied to drug development and analysis. LC-MS in Drug Analysis: Methods and Protocols provides detailed LC-MS/MS procedures for the analysis of several compounds of clinical significance. The first chapters provide the reader with an overview of mass spectroscopy, its place in clinical practice, its application of MS to TDM and toxicology, and the merits of LC-MS(/MS) and new sample preparation techniques. The following chapters discuss different approaches to screening for drugs of abuse and for general unknowns, as well as targeted measurement of specific analytes or classes of analytes including abused drugs, toxic compounds, and therapeutic agents. Written in the successful Methods in Molecular BiologyTM series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols, and notes on troubleshooting and avoiding known pitfalls. Authoritative and easily accessible, LC-MS in Drug Analysis: Methods and Protocols seeks to serve both professionals and novices with its well-honed methodologies. Liquid Chromatography Time-of-Flight Mass Spectrometry Principles, Tools, and Applications for Accurate Mass Analysis John Wiley & Sons Time of flight mass spectrometry identifies the elements of a compound by subjecting a sample of ions to a strong electrical field. Illuminating emerging analytical techniques in high-resolution mass spectrometry, Liquid Chromatography Time-of-Flight Mass Spectrometry shows readers how to analyze unknown and emerging contaminants—such as antibiotics, steroids, analgesics—using advanced mass spectrometry techniques. The text combines theoretical discussion with concrete examples, making it suitable for analytical chemists, environmental chemists, organic chemists, medicinal chemists, university research chemists, and graduate and post-doctorate students. Essentials in Modern HPLC Separations Elsevier Essentials in Modern HPLC Separations, Second Edition discusses the role of separation in high performance liquid chromatography (HPLC). This new and updated edition systematically presents basic concepts as well as new developments in HPLC. Starting with a description of basic concepts, it provides important guidance for the practical utilization of various HPLC procedures, such as the selection of the HPLC type, proper choice of the chromatographic column, selection of mobile phase and selection of the method of detection, all of which are in correlation with the physico-chemical characteristics of the compounds separated. Every chapter has been carefully reviewed, with several new sections added to bring the book completely up-to-date. Hence, it is a valuable reference for students and professors in chemistry. Provides a thoroughly updated resource, with an entirely new section on Computer-aided Method Development in HPLC and new subsections on miniaturization and automation in HPLC, chemometric aspects of HPLC, green solvent use in HPLC, and more Includes insights into the chromatographic process to find the optimum solution for analyzing complex samples Presents a basis for understanding the utilization of modern HPLC for applications, particularly for the analysis of pharmaceutical, biological, food, beverage and environmental samples Ultra-High Performance Liquid Chromatography and Its Applications John Wiley & Sons Explores both the benefits and limitations of new UHPLCtechnology High performance liquid chromatography (HPLC) has been widelyused in analytical chemistry and biochemistry to separate,identify, and quantify compounds for decades. The science of liquidchromatography, however, was revolutionized a few years ago withthe advent of ultra-high performance liquid chromatography (UHPLC),which made it possible for researchers to analyze sample compoundswith greater speed, resolution, and sensitivity. Ultra-High Performance Liquid Chromatography and ItsApplications enables readers to maximize the performance ofUHPLC as well as develop UHPLC methods tailored to their particularresearch needs. Readers familiar with HPLC methods will learn howto transfer these methods to a UHPLC platform and vice versa. Inaddition, the book explores a variety of UHPLC applicationsdesigned to support research in such fields as pharmaceuticals,food safety, clinical medicine, and environmental science. The book begins with discussions of UHPLC method development andmethod transfer between HPLC and UHPLC platforms. It then examinespractical aspects of UHPLC. Next, the book covers: Coupling UHPLC with mass spectrometry Potential of shell particles in fast liquid chromatography Determination of abused drugs in human biological matrices Analyses of isoflavones and flavonoids Therapeutic protein characterization Analysis of illicit drugs The final

chapter of the book explores the use of UHPLC in drugmetabolism and pharmacokinetics studies for traditional Chinesemedicine. With its frank discussions of UHPLC's benefits and limitations,Ultra-High Performance Liquid Chromatography and ItsApplications equips analytical scientists with the skills andknowledge needed to take full advantage of this new separationtechnology. Analytical Profiles of Drug Substances and Excipients Academic Press Although the official compendia define a drug substance as to identity, purity, strength, and quality, they normally do not provide other physical or chemical data, nor do they list methods of synthesis or pathways of physical or biological degradation and metabolism. Such information is scattered throughout the scientific literature and the files of pharmaceutical laboratories. Edited by the Associate Director of Analytical Research and Development for the American Association of Pharmaceutical Scientists, Analytical Profiles of Drug Substances and Excipients brings this information together into one source. The scope of the series has recently been expanded to include profiles of excipient materials. Robustness of Analytical Chemical Methods and Pharmaceutical Technological Products Elsevier In analytical chemistry and pharmaceutical technology attention is increasingly focussed on improving the quality of methods and products. This book aims at fostering the awareness of the potential of existing mathematical and statistical methods to improve this quality. It provides procedures and ideas on how to make a product or a method less sensitive to small variations in influencing factors. Major issues covered are robustness and stability improvement and ruggedness testing. General strategies and a theoretical introduction to these methods are described, and thorough overviews of methods used in both application areas and descriptions of practical applications are given. Features of this book: • Gives a good overview of mathematical and statistical methods used in two application areas, i.e. pharmaceutical technology and analytical chemistry • Illustrates the different approaches available to attain robustness • Gives ideas on how to use methods in practical situations. The book is intended for those who develop and optimize, and are responsible for the overall quality of, analytical methods and pharmaceutical technological products and procedures. Tietz Textbook of Laboratory Medicine - E-Book Elsevier Health Sciences Use THE definitive reference for laboratory medicine and clinical pathology! Tietz Textbook of Laboratory Medicine, 7th Edition provides the guidance necessary to select, perform, and evaluate the results of new and established laboratory tests. Comprehensive coverage includes the latest advances in topics such as clinical chemistry, genetic metabolic disorders, molecular diagnostics, hematology and coagulation, clinical microbiology, transfusion medicine, and clinical immunology. From a team of expert contributors led by Nader Rifai, this reference includes access to wide-ranging online resources on Expert Consult — featuring the comprehensive product with fully searchable text, regular content updates, animations, podcasts, over 1300 clinical case studies, lecture series, and more. Authoritative, current content helps you perform tests in a cost-effective, timely, and efficient manner; provides expertise in managing clinical laboratory needs; and shows how to be responsive to an ever-changing environment. 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Focuses on the latest analytical techniques used for studying phytochemical and other biological compounds Authored and edited by the top worldwide experts in their field Discusses the current and potential applications and predicts future trends of each compound group