

High Throughput Bioanalytical Sample Preparation Methods and Automation Strategies

Included in series: *Progress in Pharmaceutical and Biomedical Analysis*, 5

- Describes how to perform modern bioanalytical sample preparation techniques, complete with detailed strategies
- Contains a thorough literature review and summary of published information
- Provides a detailed discussion and examples of the method development process

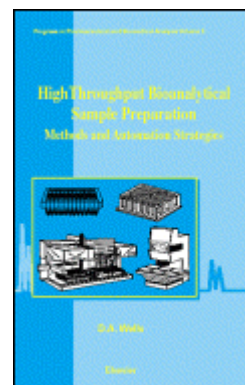
High Throughput Bioanalytical Sample Preparation: Methods and Automation Strategies is an authoritative reference on the current state-of-the-art in sample preparation techniques for bioanalysis. This book focuses on high throughput (rapid productivity) techniques and describes exactly how to perform and automate these methodologies, including useful strategies for method development and optimization. A thorough review of the literature is included within each of these chapters describing high throughput sample preparation techniques: protein removal by precipitation; equilibrium dialysis and ultrafiltration; liquid-liquid extraction; solid-phase extraction; and various on-line techniques.

The text begins with an introductory overview of the role of bioanalysis in pharmaceutical drug development. Fundamental understanding of the strategies for sample preparation is reinforced next, along with essential concepts in extraction chemistry. Several chapters introduce and discuss microplates, accessory products and automation devices. Particular strategies for efficient use of automation within a bioanalytical laboratory are also presented. The subject material then reviews protein precipitation, liquid-liquid extraction, solid-phase extraction and various on-line sample preparation approaches. The book concludes with information on recent advances in sample preparation, such as solid-phase extraction in a card format and higher density extraction plates.

Important objectives that can be accomplished when the strategies presented in this book are followed include: improved efficiency in moving discovery compounds to preclinical status with robust analytical methods; return on investment in automation for sample preparation; and improved knowledge and expertise of laboratory staff.

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