

**WILEY-Interscience**

**HPLC for Pharmaceutical Scientists**

Yuri V. Kazakevich, Rosario LoBrutto

ISBN: 0-471-68162-8

Hardcover

1096 pages            \$175.00

January 2007

*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, UPLC, Fast-LC and Chiral liquid chromatography) are also discussed.

# HPLC

for Pharmaceutical Scientists

EDITED BY **YURI KAZAKEVICH**  
**ROSARIO LOBRUTTO**

# Table of Contents

## Part I HPLC Theory and Practice

### 1. Introduction

*Yuri. Kazakevich, Rosario LoBrutto*

### 2. Theory

*Yuri Kazakevich*

### 3. Stationary Phases

*Yuri. Kazakevich, Rosario LoBrutto*

### 4. Reversed-Phase HPLC

*Rosario LoBrutto, Yuri. Kazakevich*

### 5. Normal-Phase HPLC

*Yong Liu, Anant Vailaya*

### 6. Size-Exclusion HPLC

*Yuri. Kazakevich, Rosario LoBrutto*

### 7. LC/MS: Theory, Instrumentation and Applications to Small Molecules

*Guodong Chen, Li-Kang Zhang, Birendra Pramanik*

### 8. Method Development

*Rosario LoBrutto*

### 9. Method Validation

*Rosario LoBrutto, Tarun Patel*

### 10. Computer-assisted HPLC and Knowledge Management

*Yuri Kazakevich, Michael McBrien, Rosario LoBrutto*

## Part II HPLC in the Pharmaceutical Industry

### 11. The Expanding Role of HPLC in Drug Discovery

*Daniel Kassel*

### 12. Role of HPLC in Preformulation

*Irina Kazakevich*

### 13. The Role of LC/MS in Pharmacokinetics and Drug Metabolism

*Ray Bakhtiar, Tappan Majumdar, Francic Tse*

### 14. Role of HPLC in Process Development

*Richard Thompson, Rosario LoBrutto*

### 15. Role of HPLC during Formulation Development

*Tarun Patel, Rosario LoBrutto*

### 16. The Role of HPLC in Technical Transfer and Manufacturing

*Joseph Etse*

## Part III Hyphenated Techniques and Specialized HPLC Separations

### 17. Development of Fast HPLC Methods

*Anton Jerkovich, Richard Vivilecchia*

### 18. Temperature as a Variable in Pharmaceutical Applications

*Roger Smith*

### 19. LC/MS Analysis of Proteins and Peptides in Drug Discovery

*Guodong Chen, Yan-Hui Liu, Birendra Pramanik*

### 20. LC-NMR Overview and Pharmaceutical Applications

*Maria Elipe*

### 21. Trends in Preparative HPLC

*Ernst Kuesters*

### 22. Chiral HPLC Separations

*Nelu Grinberg, Thomas Burakowski, Apryll Stalcup*