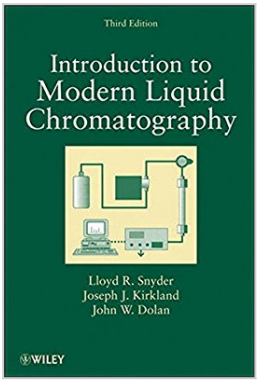


# Introduction to Modern Liquid Chromatography

*By Lloyd R. Snyder, Joseph J. Kirkland, John W. Dolan*



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**The latest edition of the authoritative reference to HPLC**

High-performance liquid chromatography (HPLC) is today the leading technique for chemical analysis and related applications, with an ability to separate, analyze, and/or purify virtually any sample. Snyder and Kirkland's Introduction to *Modern Liquid Chromatography* has long represented the premier reference to HPLC. This *Third Edition*, with John Dolan as added coauthor, addresses important improvements in columns and equipment, as well as major advances in our understanding of HPLC separation, our ability to solve problems that were troublesome in the past, and the application of HPLC for new kinds of samples.

This carefully considered *Third Edition* maintains the strengths of the previous edition while significantly modifying its organization in light of recent research and experience. The text begins by introducing the reader to HPLC, its use in relation to other modern separation techniques, and its history, then leads into such specific topics as:

- The basis of HPLC separation and the general effects of different experimental conditions
- Equipment and detection
- The column—the "heart" of the HPLC system
- Reversed-phase separation, normal-phase chromatography, gradient elution, two-dimensional separation, and other techniques
- Computer simulation, qualitative and quantitative analysis, and method validation and quality control
- The separation of large molecules, including both biological and synthetic polymers
- Chiral separations, preparative separations, and sample preparation
- Systematic development of HPLC separations—new to this edition
- Troubleshooting tricks, techniques, and case studies for both equipment and chromatograms

Designed to fulfill the needs of the full range of HPLC users, from novices to experts, *Introduction to Modern Liquid Chromatography*, Third Edition offers

the most up-to-date, comprehensive, and accessible survey of HPLC methods and applications available.

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## Editorial Review

Review
"In summary, I would strongly recommend this book for anyone working with LC and LC/MS. It is a finely crafted introduction that adequately covers nearly every aspect of the science. The emphasis on basic principles and practical aspects ensures that it will be a useful reference for many years to come." (J Am Soc Mass Spectrom, 2011)

"This third edition is highly cross-referenced, so as to allow the reader to follow up on topics of special interest, or to clarify questions that may arise during reading. The third edition of Introduction to Modern Liquid Chromatography will continue to be the HPLC reference book for thousands of readers, either experienced workers who may wish to explore topics of his/her choice, or find an answer to specific problems, or beginners who would like to understand and know the possibilities offered by the technique." (Chemistry Journals, 11 April 2011)

"This classic text on liquid chromatography has been thoroughly updated through the addition of information on modern instrumentation, columns, and troubleshooting. It is a valuable resource for practicing chromatographers at all levels.." (Anal Bioanal Chem, 2011)

"In summary, I would strongly recommend this book for anyone working with LC and LC/MS. It is a finely crafted introduction that adequately covers nearly every aspect of the science. The emphasis on basic principles and practical aspects ensures that it will be a useful reference for any years to come." (American Society for Mass Spectrometry, 21 Januay 2011)

"The text is illustrated with many figures and tables originating from authors' own work or taken from the literature . . . both groups of readers will find in this book plenty of information and inspiration." (Journal of Separation Science, 1 June 2010)

"Following their highly successful second edition (1979), which appeared more than 30 years ago, Snyder (LC Resources) and Kirkland (Advanced Materials Technology) have teamed with Dolan (LC Resources) and additional collaborators to provide an excellent update of their earlier work." (*CHOICE*, July 2010)

"It is difficult in these times to ever call a scientific book a "bargain", but this truly is. The wealth of information contained in these almost 1000 pages is invaluable. The book is comprehensive, eminently readable and approachable, and highly useful for both the skilled chromatographer and those new to the technique. Everyone using a liquid chromatographic instrument would benefit from owning a copy." (*JACS*, 2010)

"It's current, clearly-indexed, well-referenced, and comprehensive. The inclusion of John Dolan as author has significantly expanded the sections on troubleshooting, and additional expert contributors have enhanced the coverage of the specialist chapters." - Bruce Hamilton posted on the Chromatography Forum

From the Back Cover
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About the Author
**Lloyd R. Snyder, PhD**, is a Principal at LC Resources in Walnut Creek, California. He is the author or coauthor of several books including An Introduction to Separation Science, Introduction to Modern Liquid Chromatography, Second Edition, the bestselling Practical HPLC Method Development, Second Edition, and the comprehensive High-Performance Gradient Elution, all published by Wiley.

**Joseph J. Kirkland, PhD,** is Vice President of Research and Development for Advanced Materials Technology, Inc., and coauthor of Introduction to Modern Liquid Chromatography, Second Edition, Practical HPLC Method Development, Second Edition, and Modern Size-Exclusion Liquid Chromatography, Second Edition, all published by Wiley.

**John W. Dolan, PhD,** is a Principal at LC Resources. He is author of the popular "LC Troubleshooting" column in LCGC magazine and coauthor with Lloyd Snyder of Troubleshooting LC Systems and High-Performance Gradient Elution.

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