

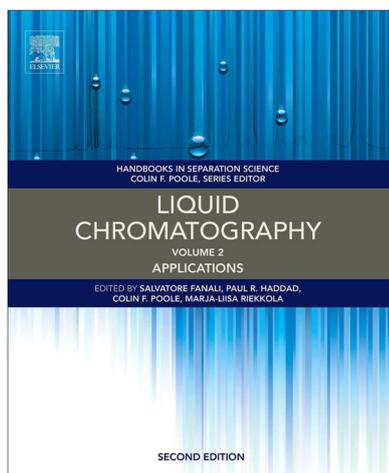


# Salvatore Fanali, Paul R. Haddad, Colin F. Poole, Marja-Liisa Riekkola (Eds.): *Liquid chromatography: applications*, 2nd ed.

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## Bibliography

Liquid chromatography: applications, 2nd ed. Salvatore Fanali, Paul R. Haddad, Colin F. Poole, Marja-Liisa Riekkola (Eds.) Series: Handbooks in Separation Science Elsevier ISBN: 978-0-128-05392-8 Paperback, 838 pages, 25 June 2017, €192.60/\$165.75

**Book's topic and contents** Although considered a mature science, liquid chromatographic separations are essential for the identification and quantitation of analytes in complex matrices. The second edition of *Liquid chromatography: applications* provides the reader with background information, general approaches, and specific examples for clinical, environmental, food and supplement, and pharmaceutical communities. Seventy-four authors contributed to twenty-four chapters, some of which are new topics included in the second edition, while others are updated chapters from the previous edition.

Review of this book is not intended to imply recommendation or endorsement by the National Institute of Standards and Technology.

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There are five new subject areas/approaches presented as chapters including: Sample preparation for liquid chromatography (H. Kataoka), Liquid chromatographic separation of oligonucleotides (M. Biba, J.P. Foley, and C.J. Welch), Metabolic phenotyping (metabonomics/metabolomics) by liquid chromatography-mass spectrometry (H. Gika, G. Theodoridis, P. Rainville, R.S. Plumb, and I.D. Wilson), Foodomics: LC and LC-MS based omics strategies in food science and nutrition (B. Gilbert-Lopez, A. Valdes, T. Acunha, V. Garcia-Canas, C. Simo, and A. Cifuentes), Principles, current applications, and future perspectives of liquid chromatography-mass spectrometry in clinical chemistry (M. Ludovici, C. Ialongo, and E. Camera), and Environmental analysis: atmospheric samples (J. Parshintesev, K. Hartonene, and M.L. Riekkola).

Many of the chapters that appeared in the first edition are presented in the second edition. These chapters include information on the most novel scientific approaches and many have new contributing authors or entirely new authors. These chapters are as follows: Derivatization in liquid chromatography (C.F. Poole), Liquid chromatographic separation of enantiomers (B. Chankvetadze), Amino acid and bioamine separations (R. Koga, Y. Miyoshi, K. Todoroki, and K. Hamase), Protein and peptide separations (U. Andjelkovic, J. Giacometti, and D. Josic), Separation of glycans and monosaccharides (L. Royle), Separation of lipids (P. Donato, P. Dugo, and L. Mondello), Forensic toxicology (C. Kostakis, P. Harpas, and P. Stockham), Compositional analysis of foods (M. Herrero, M. Castro-Puyana, E. Ibanez, and A. Cifuentes), Multiresidue methods for pesticides and related contaminants in food (M. Ibanez), Environmental analysis: persistent organic pollutants (L.C. Sander, M.M. Schantz, and S.A. Wise), Environmental analysis: emerging pollutants (M. Celic, M. Farre, M. Lopez de Alda, S. Perez, D. Barcelo, and M. Petrovic), Analysis of natural toxins by liquid chromatography (I. Rodriguez, J.M. Gonzalez, A.M. Botana, M.J. Sainz, M.R. Vieytes, A. Aflonso, L.M. Botana), Liquid

chromatography in the pharmaceutical industry (R. Szucs, C. Brunelli, R. Lestremau, and M. Hanna-Brown), Determination of veterinary drug residues in foods by liquid chromatography-mass spectrometry-basic and cutting edge applications (M.D. Marazuela), Analysis of vitamins by liquid chromatography (A. Gentili and F. Caretti), Applications of liquid chromatography in the quality control of traditional Chinese medicines (S.C. Lam, Z.L. Yang, J. Zhao, and S.P. Li), Analysis of neurotransmitters and their metabolites by liquid chromatography (K.E. Bosse, J.A. Birbeck, B.D. Newman, and T.A. Mathews), and Speciation and element-specific detection (B. Michalke and V. Nischwitz).

Finally, two chapters were eliminated in the second edition. The first edition remains a valuable reference for these topics: Liquid interaction chromatography of polymers (W. Radke and J. Falkenhagen), and Clinical chemistry including therapeutic drug monitoring and biomarkers for disease (G. Baird). The chapters on Affinity chromatography (D.S. Hage, J.A. Anguizola, R. Li, R. Matsuda, E. Papastavros, E. Pfaumiller, M. Sobansky, and X. Zheng) and Validation of Liquid Chromatographic Methods (K.L. Barnett, B. Harrington, and T.W. Graul) were updated and moved to the first volume, *Liquid chromatography: fundamentals and instrumentation*.

**Readership recommendation and critical assessment** This book presents basic information on approaches toward the separation of analytes from environmental, clinical,

pharmaceutical, food, and forensic matrices. Through this information, the reader is given a background in important topics such as sample preparation, column selection, and instrument selection. The comprehensive approach toward liquid chromatography applications makes this book a valuable resource for anyone who is faced with developing a new separation method or improving an existing separation. As a result, it would be most useful for bench level researchers and their managers.

The proper use of mass spectrometry as a tool in separations science is more heavily emphasized than it was in the first edition which is essential for non-targeted and “omics” approaches to sample analysis. The only minor downside to the book is the chapters could be better organized with the chapters related to a similar application clustered together and the more general chapters at the beginning. This should not dissuade users as the book is well indexed and has a comprehensive references section.

**Summary** This book serves as a valuable update to the first edition of *Liquid chromatography: applications*. New technologies and approaches to complex separations problems have been presented clearly by a series of qualified authors resulting in a good reference for the analytical laboratory.

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