Gooding, K.M., Regnier, F.E. (ed.): **HPLC of Biological Macromolecules.** – Marcel Dekker, New York – Basel 2002. ISBN 0-8247-0665-X. 778 pp., USD 195.00.

Because its varied and complementary array of techniques has enabled many proteins to be isolated and characterised, chromatography played a key role in the evolution of modern biochemistry. During the past two decades, high-performance liquid chromatography (HPLC) has emerged as a dominant technique in this field for its improved resolution and reduction of analysis times. Chromatographic methods have become the method of choice for the solution of analytical and separation problems in all areas of application, including biotechnology, environmental sciences, biopolymers, pharmaceuticals, and many more.

The first edition of this book was written as a practical guide for scientists, this second edition includes many of the same topics, updated for discoveries of the past ten years. This book contains 18 chapters, 222 figures, 57 tables, and 117 equations on more then 700 pages written by 34 international authorities from Australia, Austria, Canada, Finland, Germany, Japan, the Netherlands, Spain, and the USA. There are three parts in this book: The Technique, Class-Specific Applications, and Detection Methods. A detailed subject index makes orientation in the book easy.

Part one (The Technique) presents on nine chapters the fundamental concepts of HPLC in the context of biological macromolecules. These chapters describe techniques of sample preparation, physical and chemical characteristics of silica and organic polymers as support materials in HPLC, and main methods for resolution of biomacromolecules, for example size exclusion chromatography, ion-exchange chromatography, reversed phase chromatography, metal interaction chromatography, and gradient elution separation.

The second block describes in six chapters class-specific applications of biomacromolecules separation, for example analytical HPLC of peptides, HPLC of membrane proteins and cereal endosperm storage proteins, identification of hemoglobin variants by isoelectric focusing and cation-exchange chromatography and their separation by reversed-phase chromatography, affinity and nonaffinity chromatographic methods of antibodies purification, and analysis of glycoproteins.

The last three chapters deal with detection methods for identification and quantification of biomacromolecules during chromatography, for example immunodetection of proteins, characterisation of proteins, peptides, and polynucleotides by mass spectrometry, and detection and analysis of proteins by HPLC with photodiode array detection.

Generally, this book is an excellent source of recent information on the HPLC and a practical guide. Each chapter is accompanied by a list of references (together almost 2 200 citations). The book is well edited and produced and can be recommended to all scientists and students who fractionate proteins, peptides, and polynucleotides.

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