



Book Review

HPLC of Biological Macromolecules: 2nd edition

Karen M. Gooding, Fred E. Regnier (Eds.); Marcel Dekker, Inc., New York, 2002, ix + 777 pages, ISBN 0-8247-0665-X

Much development has been made over the past two decades on chromatography techniques for separating and analysing the constituents of a solution. High performance liquid chromatography (HPLC) has currently emerged as the principal tool in this field of work. The refinements in HPLC have focused on reducing analysis time and improving resolution and recoveries. In turn this yields excellent results as demanded by the scientist. The first edition was aimed as a practical guide for scientists involved in the fractionation of proteins, peptides, and polynucleotides. This edition covers many revised topics but with the addition of the latest discoveries and guidelines on modern analytical techniques. There are also current discussions on chemical and biological properties.

HPLC of Biological Macromolecules presents an informative edition of theory and practise divided into three sections. Part one contains chapters devoted to the fundamental concepts of HPLC with an overall context of biological macromolecules. This section covers theoretical and practical aspects of various techniques. These include size-exclusion chromatography, ion-exchange chromatography, reverse-phase and hydrophobic chromatography, metal interaction chromatography, preparative chromatography. Other topics detail silica and organic polymer support materials. Part two utilises part one and covers the class specific applications of biological materials. These include HPLC and analysis

of peptides, membrane proteins, cereal endosperm storage proteins. Other areas covered are the analysis of haemoglobin variants, antibodies and glycoproteins. Each chapter opens with a brief discussion on the chemical and biological properties of the biological material of interest followed by an in depth discussion of the HPLC tool utilised for its analysis. Part three focuses on the detection methods that are ideal for the quantitative and qualitative analysis of complex mixtures and minute quantities frequently encountered. Chapters in this section are devoted to the use of immunodetection of proteins in high resolution; mass spectroscopy for the characterisation of proteins, peptides and polynucleotides; and the use of photodiode array detection for HPLC in the detection and analysis of proteins.

This book contains over 2200 contemporary references and clear diagrams presented throughout. *HPLC of Biological Macromolecules*, put together by leading experts in the field, is aimed at providing an invaluable source for scientists who are interested in evaluating and implementing methods for analysis of biological materials. It is an essential source for biochemists, molecular and cell biologists, biophysicists, geneticists, chemical and biotechnological engineers, biochemical neuroendocrinologists, and graduates of all levels.

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