
BOOK REVIEW

Affinity Chromatography. Methods and Protocols

(2nd Edn., M. Zachariou (ed.), in *Methods in Molecular Biology*, Vol. 421,
J. Walker (Series ed.), The Humana Press, Totowa, NJ, 2008, 343 p., \$99.50)

DOI: 10.1134/S0006297908100155

The book consists of three parts including 21 chapters that have been written by a large group of authors from many countries.

Chapter 1 is an introduction summarizing the history of affinity chromatography (AC), advantages and limitation of this method, and also providing perspectives for the future development of AC techniques.

Part I (chapters 1-6) highlights various modes of AC including immobilized metal ion AC of native proteins, affinity precipitation of proteins using metal chelates, immuno-AC, and dye ligand chromatography.

Part II (chapters 7-15) is devoted to AC with specific ligands on adsorbent matrix with high affinity to isolated proteins. This section also describes types of AC with phages and metals as affinity ligands for proteins with histidine- or histidine/glutamine-tagged fusion protein. There is a description of AC with amylose matrix showing binding properties for proteins with high affinity to maltose. This

part also includes discussion of AC methods for detection of protein–protein and protein–DNA interactions, as well as site-specific cleavage of fusion proteins with techniques for optimizing the yield of authentic product.

Part III (chapters 16-21) describes the application of AC in various methods, such as its use in affinity capillary electrophoresis, AC of phosphorylated proteins, protein separation using immobilized phospholipid chromatography, plasmid DNA purification, and AC applications in bioreactors.

Description of each method with following detailed protocol recommends this book as a manual for many specialists involved in purification of biomolecules in various fields of biochemistry, molecular biology, biotechnology, and bioorganic chemistry. The book can also be recommended as a handbook for university students and their teachers as well as for other schools preparing specialists in the above-mentioned fields.

*Doctor in Biological Sciences,
G. Ya. Wiederschain*