
BOOK REVIEW

Capillary Electrophoresis of Proteins and Peptides

(Strege, M. A., and Lagu, A. L. (eds.) in *Methods in Molecular Biology*
(Walker, J., ed.), Vol. 276, Humana Press, Humana, 2004, 332 p., \$125)

The book consists of 15 chapters written by an international group of distinguished experts. Chapter 1 deals with methods of capillary electrophoresis using detergents which prevent protein adsorption.

Chapter 2 describes methods of protein separation by capillary electrophoresis (CE) employing Si-O and Si-C coated capillaries. Special attention is paid to equipment required for capillary wall coating and to description of methods of fluorescent labeling of proteins and peptides for subsequent detection of labeled compounds by means of a laser-induced fluorescent detector (so-called CE-LIF, Capillary Electrophoresis with Laser-Induced Fluorescent Detector).

Chapter 3 deals with analysis of single cell proteins using fluorescent detection. Chapter 4 considers covalent and noncovalent protein labeling using infrared absorbing dyes.

In chapter 5 authors discuss use of CE for analysis and monitoring of biotechnological processes: characterization of recombinant proteins, hybridoma cell cultivation, enzymatic processes, and during purification of proteins and peptides. Chapters 6-9 deal with use of CE for

quality control, study of ligand-receptor interaction, characterization of N-oligosaccharides and screening of the main human albumin binding sites. Chapter 10 deals with methods of CE used for analysis of size and charge of protein molecules. Chapters 11-14 contain important information on various types of CE and their facilities in studies of proteins, protein complexes, peptides, and amino acids with use of CE and mass-spectrometry.

In chapter 15 authors discuss application of an integration system for rapid protein analysis using nanoelectrospray-mass spectrometry.

The main advantage of this book consists in detailed description of various approaches for CE application, protocols, and explanations given in each chapter. The alphabetical index, bibliography, figures, and schemes help better understanding and successful use of these methods.

This book will be useful for biochemists, biotechnologists, and specialists in proteomics and protein chemistry. *Capillary Electrophoresis of Proteins and Peptides* can also be useful for teachers and their students specializing in the above mentioned areas.

Doctor of Biological Sciences
G. Ya. Wiederschain