

Book review

Capillary Electrophoresis Guidebook, Principles, Operation, and Applications, Vol. 52 of the *Methods in Molecular Biology* series, edited by K.D. Altria, Humana Press, 349 pp., US\$74.50. ISBN 0-89603-315-5.

Capillary Electrophoresis (CE) is a relatively new and rapidly evolving analytical separation technique inherently useful for the determination of the purity and impurities of substances. Investigators from a variety of scientific disciplines are currently pioneering new applications for CE. Recently, there has been a need for an up-to-date, comprehensive guide to its operation and application. This volume fills that void. The book is suitable for the novice as well as expert in CE and researchers and practitioners in the field should consider this a necessary addition to their library of references.

The first part of the book contains 11 chapters pertaining to fundamental theory and practical operational procedures. This section was written by editor Kevin D. Altria, a foremost practitioner of CE in the pharmaceutical industry. Discussions on methods development, quantitation, methods optimization, validation, and troubleshooting are among the several topics contained within the Part I chapters. These make for informative, concise, and frequently novel reading and will be of tremendous assistance to those needing practical guidance in the development of quantitative methods as well as a basic understanding of theory. The novelty is due to the fact that many of the practical procedures and observations described have originated from the author's own experience in his pharmaceutical analysis/CE laboratory. In addition to the fundamental operational aspects

of CE, the first section contains a helpful chapter detailing the current procedures used for fraction collection for those considering to utilize this technique.

Part II contains nine review chapters on the various specific applications and technologies of CE written by well known investigators in these areas. Some of the topics included are the theory of and applications developed for micellar electrokinetic chromatography (MEKC), capillary gel electrophoresis, chiral CE, and capillary electrochromatography. These are up to date (containing references dating up to December, 1995) and are particularly useful for those exploring the development of methods using the core CE separation strategies. Other chapter topics are on the use of sample stacking, analysis of nucleosides, bases, single stranded (oligo) nucleotides, protein digests and peptides as well as a review on the CE analysis of pharmaceuticals. The final chapter reviews additional areas such as the analysis of small ions, agrochemicals, carbohydrates, and vitamins. The chapters on MEKC (by K. Otsuka and S. Terabe) and chiral CE (M. Rogan and K. Altria) are noted to be among those that were particularly enjoyable due to the significance and utility of the topic, quality and clarity of the writing, and completeness of the overview.

This comprehensive book will serve as a practical guide as well as an inspiration to those endeavoring to harness the potential of CE within their analytical laboratories. For the purchase price, one can acquire their money's worth in valuable CE information.

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