

Book reviews

Pharmaceutical and Biomedical Applications of Liquid Chromatography, edited by C.M. Riley, W.J. Lough and I.W. Wainer, Pergamon, Oxford, 1994, x + 379 pp., £85.00. ISBN 0 08 041009X.

In selecting contributors for this volume, the editors sought to reflect developments over the last ten years and to look forward to potential major methods in the future. Appropriately, they have looked at the whole process of analysis from sample preparation to validation and have interpreted liquid chromatography broadly to include other separation processes carried out in a liquid medium.

The first section on new technology includes chapters on the potential of capillary electrophoresis (CE) by Lloyd, methods for fast chiral separations by Perrin, and an update of methods for amines, amino acids and peptides by Riley, Stobaugh and Lunte, which includes sections on postcolumn reagents and electrochemical detection. Almost inevitably, continuing advances mean that the CE chapter could now be rewritten, particularly in the scope and validation of real applications, but it provides a useful introduction to the methods and techniques that are available.

The next group of chapters concentrates on methods for the isolation of compounds from biological matrices. These include solid phase extraction by Zief and Kakodkar and on the uses of restricted access media by Perry. Riley, Ault and Lunte then describe the use of microdialysis for continuous on-line sampling and finally, Lough and Noctor describe how achiral and chiral columns can be linked to increase selectivity. In further chapters, Mical and Wuonola discuss preparative separations during drug discovery and Narayanan describes the purification of proteins and peptides.

The final pair of chapters by Bopp and co-workers and by Lang and Bolton describe the development and validation of liquid chromatographic methods in the pharmaceutical

industry. They look at some of the problems of reproducibility familiar to all chromatographers and at the criteria for the acceptance and rejection of analytical results.

Overall the book provides a useful description of a number of important aspects of the role of liquid chromatography in the pharmaceutical industry. Inevitably the coverage is broad but future volumes in this series plan to focus on specific areas. The presentation is generally good with references leading to further sources; however, some of the sections from suppliers tend to promote the methods rather than review the field or describe real applications making it difficult to judge the degree of acceptance of the techniques.

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Advances in Chromatography, Vol. 35, edited by Phyllis R. Brown and Eli Grushka, Marcel Dekker, 1995, \$165.00. ISBN 0-8247-9361-7.

This volume of *Advances in Chromatography* is the 35th volume in the series originally begun by J. Calvin Giddings. Workers interested in applications of capillary electrophoresis (CE) will find the latest volume extremely useful since four of the eight chapters deal with aspects of this topic. Optical detectors for CE are discussed by Edward Yeung. Kenneth Tomer, Leesa Deterding and Carol Parker have provided a timely evaluation of the coupling of CE with mass spectrometry, which hopefully will encourage additional workers to enter the field. In other chapters, approaches for the optimization of CE experimental parameters are outlined, and the use of CE in pharmaceutical analysis is discussed.

The other chapters in this volume represent an interesting cross-section of chromatographic interests, ranging from the theoretical to the

very applied. Veronika Meyer summarizes the possible sources of error when determining chromatographic peak size ratios, while M.C. Gennaro outlines reversed-phase ion-pair and ion-interaction chromatography. Richard Pauls has developed a most comprehensive study of the use of chromatography in the analysis of gasolines. The complexity of these analyses will impress anyone who has ever driven a car. Finally, Christopher Welch has written a superb history of how Pirkle-type chiral stationary phases have changed since their original introduction up to the present moment.

The overall quality of the chapters in this collected volume is quite high, and each chapter would be greatly beneficial to anyone needing a quick introduction into one of the areas covered. Any library maintaining the series should definitely acquire volume 35, and CE investigators should consider purchasing the volume for their personal collection.

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