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Book Review

Principles and Practice of Modern Chromatographic Methods, edited by K. Robards, P.R. Haddad and P.E. Jackson; Academic Press, London, 1994, XI+495 pp., price £35.00, ISBN 0-12-589570-4.

This is a carefully written, broadly based, text for either the non-specialist chromatographer or those scientists who use chromatography extensively in their work but don't consider themselves experts on the topic. It is significantly more than a simple introduction to the topic but by no means an advanced treatise. It would be most helpful to those readers with some knowledge of at least one area of chromatography who want to broaden their horizons. I would have no hesitation in recommending the text to my undergraduate students working on projects in chromatography or to support their lecture material; it lacks certain elements, however, for general use as a graduate student text.

Essentially, the reader will find an even coverage of the main chromatographic techniques of gas, liquid, thin-layer and supercritical fluid chromatography, supplemented by additional chapters on sample handling and qualitative and quantitative analysis. The first two chapters provide an overview of chromatographic methods and a general theory of chromatography in a comprehensive fashion, showing how the different techniques of chromatography have evolved and their relationship to one another. This is very welcome in indicating the similarity of the methods rather than treating them as unrelated topics, as tends to be the case with too many modern texts. It is disappointing that capillary electrophoretic methods are not discussed in the book, as these are currently of much interest to chromatographers. Likewise, the last chapter on qualitative and quantitative analysis tends to repeat information already

covered, to varying extents, elsewhere in the book and contains a series of practical examples that seem to lack general relevance.

There are some features of the book that I was less happy with. The index is too short and not particularly useful, although the lay-out of the book is quite clear, and if you know what you are looking for then topics are where you would expect to find them. There is a general lack of figures in those sections dealing with instrumentation, and where figures are presented they often depict devices that are out of date. In those sections dealing with liquid chromatography, the heavy emphasis in Tables and Figures to Waters chromatography products is a little off-putting and perhaps too commercial. A good example is Figure 6.49, a guide for selection of chromatographic separation modes, which, with a few exceptions, directs you to the Waters column packing product to choose for your separation. This would have been more helpful if it simply indicated the generic separation mode to use. The liquid chromatography section lacks any discussion of LC-MS, LC-FTIR or LC-GC, in contrast to the gas chromatography chapter that covers GC-MS and GC-FTIR in an adequate manner. Kinetic aspects of column properties are generally covered quite well, but retention mechanisms and method development strategies tend to be covered in an uneven fashion in the different chapters and often provide the reader with little real insight into these topics.

The book has been adequately proof read and very few mistakes were noticed by this reviewer. The

form of the resolution equation on page 65 is for the average capacity factor and not the larger capacity factor as stated.

Overall, this is a welcomed contribution to the chromatography literature and can be recommended to its target audience. This reviewer would rate it

among the best texts of its type currently available and the authors have been broadly successful in meeting their stated goals.

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