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A Review of: "SEPARATION AND PURIFICATION TECHNIQUES IN BIOTECHNOLOGY Frederick J. Dechow Noyes Publications, Park Ridge, NJ, August 31, 1989, hardbound, 490 pages, \$72.00."

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BOOK REVIEW

SEPARATION AND PURIFICATION TECHNIQUES IN BIOTECHNOLOGY

Frederick J. Dechow

Noyes Publications, Park Ridge, NJ, August 31, 1989,
hardbound, 490 pages, \$72.00.

Chapter 1 is a brief overview of all separations other than sorption separations which are used in biotechnology and includes separations such as membranes, solvent extraction etc. This chapter is dated and is too brief to be very useful. Since only sorption separations are covered in any depth, a more accurate title for this book would be Sorption Separations in Biotechnology.

Chapter 2 is a reasonable review of Adsorption except that all but one of the references is from 1984 or earlier. The development of adsorption is general and not specific to bioseparations, but the ten pages of applications are all bioseparations.

Chapter 3 on Ion Exchange is very good and is the strength of this book. If you are interested in ion exchange of biochemicals, this chapter easily justifies buying this book. There is a wealth of good practical information which could save the novice in ion exchange or in bioseparations a lot of time and money. The tables and figures contain considerable useful information. With 44 pages of bioseparations applications, the author has covered almost all important ion exchange separations of biochemicals. Unfortunately, this chapter appears to be a core dump and the chapter jumps from topic to topic. The 191 references stop in 1985; naturally, more recent references would be desirable.

Chapter 4 on Column Chromatography has a heavy emphasis on ion exchange chromatography. This is also quite a good chapter although it is light on HPLC systems. The practical information on large scale systems and the 20 pages of bioseparation applications are useful. This chapter is also jumpy which occasionally makes it a bit confusing. The 162 references stop in 1987.

The final chapter on Affinity Chromatography is a bit disappointing after the quality of chapters 3 and 4. This chapter is a reasonable review of affinity chromatography, but there are many equally good or better reviews available. The 11 pages of applications are disappointing since most are for small-scale systems.

This book has some problems in the details of how it was put together. There are a fair number of typographical errors. The index is useful if the reader wants to look up a chemical, but otherwise just repeats the table of contents. Figures and tables borrowed from other sources are not always credited properly. The list of manufacturers is useful, but would be more useful if complete addresses and phone numbers were given.

In summary, if you are interested in ion exchange or ion exchange chromatography particularly of biochemicals, buy this book.

Phillip C. Wankat