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Book Review

Protein Purification

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Springer-Verlag, New York, 1982, 282 pp., $29.95

This modestly sized book on the art of protein isolation is a treasure trove of many practical methods. But more than that it teaches the craft in a logical and sensible way. Each technique is carefully presented with meaningful diagrams and well-chosen text. Concepts are clearly explained then reinforced with tidbits of insight from practical experience. Such an approach makes this an excellent self-tutorial text for the student or working professional new to this area. Professor Scopes leads the reader 'by-the-hand.'

The book has a sensible organization: 'Making an Extract' (Chap. 2), 'Separation by Precipitation' (Chap. 3), 'Separation by Adsorption' (Chap. 4), 'Separation in Solution' (Chap. 5) and so on. Chap. 4 extensively covers various chromatographic techniques and includes a thorough discussion of affinity elution from ion exchangers and other nonspecific adsorbents. Furthermore, affinity chromatography is critically assessed with proper attention to the quantitative and structural parameters that can determine success or failure in affinity sorbents.

A short chapter (7) on 'Optimization' of purification procedures is very enlightening, in particular its discussion of the time factor in operations and the trade off between speed and resolution in given situations. Of course, these considerations are very important in scaling-up (or scaling-down) protein isolations.

Owing to his vast experience in enzymology, the author naturally deals with enzymes for illustration. Hence the supporting chapters focus on enzyme assaying and purity determination. Though antibodies (immunoglobulins) or other non-enzyme proteins are not covered in the book, most of the general principles presented in the text are nevertheless useful for workers in these fields.

A minor criticism: this reviewer would have liked more extensive citation in the text to original literature. The author reveals much accumulated 'know how' acquired, no doubt, from many sources over a long period of time. For the serious student, more original source references in the text would have been very useful. On the other hand, Scopes has provided titles to the articles listed in the references. This makes it much easier to find the desired paper in the library.

This pleasantly readable book is highly recommended as a working companion in the lab or for the reading shelf of those who want to learn about this fascinating methods-oriented craft.

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