

BOOK REVIEWS

N. G. GAYLORD, Editor

Ion Exchange Separations in Analytical Chemistry. O. SAMUELSON. Wiley, New York-London-Sidney, and Almqvist & Wiksell, Stockholm, 1963, 474 pp. \$9.50.

Although ion exchange is an important tool in analytical chemistry, its full potential has not been realized. One factor that has retarded the wide-spread utilization of ion exchange techniques in analytical chemistry is the lack of adequately developed techniques and procedures that can be simply used by the uninitiated. Ten years ago, Olof Samuelson's book, *Ion Exchangers in Analytical Chemistry*, appeared and served admirably to aid the analyst to make use of this important analytical tool.

Samuelson's recent book, *Ion Exchange Separations in Analytical Chemistry*, although a new book and essentially a revised edition of his first book on this subject, is most welcome, particularly since the older book is now out of print. The second edition has the same format as the first edition; however, it has been brought up-to-date in all aspects.

The first part of the book deals with the fundamental properties of ion exchange resins and those principles and theories pertaining to ion exchange separations. The second section deals with techniques and the third with specific applications. All three sections are up-to-date and are clearly written. Those portions devoted to general techniques and specific applications include specific details so as to permit the chemist to use the book as a laboratory manual as well as a reference book.

Those chapters dealing with the determination of total concentration and the analysis of trace constituents, two important applications of ion exchange, are quite detailed and will be of considerable value to many analysts.

Samuelson's book, although restricted to separations used primarily in the analysis of inorganic substances, will be of considerable value to those interested in all the aspects of ion exchange. However, in view of the extreme interest in the use of ion exchange in the analysis of organic and biochemical substances, it may be disappointing to some that the author did not include a section on the use of ion exchange in the analysis of amino acids, peptides, and proteins.

In view of rapid progress made in the field of ion exchange research and the utility of ion exchange in analytical chemistry, Samuelson's new book is most timely and will prove most valuable to all those interested in ion exchange, particularly those engaged in analytical chemistry. Both the author and the publishers are to be complimented for this well-prepared and well-edited book. There are very few errors in the text and the book is well indexed and illustrated. The bibliography at the end of each chapter is quite up-to-date.

Robert Kunin

Rohm & Haas Company
Philadelphia, Pennsylvania