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A Review of: "Wilson & Wilson's Comprehensive Analytical Chemistry Volume XIV: Ion Exchangers in Analytical Chemistry. Their Properties and Use in Inorganic Chemistry, M. Marhol, Elsevier, Amsterdam, \$127.75 (US)"

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BOOK REVIEW

WILSON & WILSON'S COMPREHENSIVE ANALYTICAL CHEMISTRY VOLUME XIV: ION EXCHANGERS IN ANALYTICAL CHEMISTRY. THEIR PROPERTIES AND USE IN INORGANIC CHEMISTRY, M. Marhol, Elsevier, Amsterdam, \$127.75 (US).

This book comprises three parts. Part 1 introduces some of the basic concepts of ion exchange, the skeletal network, inorganic functional groups, selectivity, swelling, etc. The theoretical treatment of the exchange process is adequate. Part 2 has useful information on practical procedures for the characterization of ion exchange resins. The subject of instrumentation for ion exchange chromatography receives very light treatment and the little information that is supplied is quite out of date. Most of Part 2 is devoted to a recitation of procedures where ion exchangers are used in essentially batch methods to effect separations. This section, too, is rather out of date.

Since the book covers references up to 1978, it misses recent developments in inorganic chromatography that are having a major impact on inorganic analysis. Some of the applications raise questions as to their purpose. For example, "preparation of dilute carbonate-free solutions of sodium or potassium hydroxides" requires as a first step the conversion of a strong base anion exchanger to the hydroxide form with carbonate-free sodium hydroxide. What is the point of this exercise?

Part 3 has a wealth of tables on cation and anion distribution coefficients in a great variety of media, diffusion coefficients, types of functionality, trade names, etc. This is, in my opinion, the most valuable part of the book and should be useful to those who regularly use ion exchange resins in their work.

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