BOOK REVIEW

THE ANALYTICAL USES OF ETHYLENEDIAMINETETRAACETIC ACID. By F. J. Welcher. Pp. xvii + 366 (including Bibliographical References and Index). D. Van Nostrand Company Ltd., London, 1958. 64s.

The number of published papers which have been devoted to the use of ethylenediaminetetra-acetic acid (EDTA) as an analytical reagent is large and ever-increasing. In this volume Professor Welcher has aimed at providing a comprehensive review of the work and he is to be congratulated on having achieved so great a measure of success. In his preface the author makes it clear that no attempt has been made to give a critical evaluation of each method and that the volume is not to be regarded as a handbook of recommended methods. To have compared and contrasted the many published methods would surely have been a task beyond the power of any one man to perform; even in the limited field of pharmaceutical applications it has already become difficult to examine every procedure from a critical standpoint. It is with this limitation in mind that the book should be considered.

The subject matter has been divided into 18 chapters, the first 4 of which deal with general theoretical and practical considerations. The fifth chapter is devoted to the determination of water hardness and this is followed by a number of sections, forming the major part of the work. These describe the application of EDTA titration methods to the determination of many metal ions. Miscellaneous chapters at the end of the book deal with the determination of anions, the aplication of polarographic, amperometric and colorimetric methods, and the use of EDTA in qualitative analysis and as a masking agent to prevent interference in other methods of analysis. The work is concluded by a list of nearly 1000 references which represents a careful selection of the more important papers up to 1957. So rapid is the development of the technique, however, that new fields of investigation such as the determination of alkaloids through their metal compounds are not mentioned.

To demonstrate the immense value of the book and to draw attention to the possible pitfalls, reference might be made to the section on the determination of aluminium. The newcomer to complexometric analysis will find, in Chapter IX, no less than 10 possible methods set out in detail, together with references to several others. The worker with plenty of time to compare and assess these procedures will find the information of considerable value, but the analyst seeking a reliable method for immediate application may well find that the choice before him tends to bewilder rather than to assist. Usually, published applications are by no means of uniform excellence and all too often in the past authors have failed to make a scientific comparison of their work with other published methods. This is a short-coming which cannot be laid at Professor Welcher's door, and it is to be hoped that his excellent book will stimulate a more critical approach on the part of would-be contributors of papers in the future.

As a practical manual the book is to be very warmly recommended; it has very few typographical errors, is well bound and will remain open at any page on the laboratory bench.

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