Book Reviews

Quantitative Chemical Analysis. 10th ed. Leicester F. Hamilton and Stephen G. Simpson. New York: Macmillan, 1952. 529 pp. Illus. $4.50.

This book is the tenth edition of one first published in 1897 by H. P. Talbot. Any such work must have real merit to survive for half a century.

The chief question is what changes have been made in the latest edition. Although numerous, in general these represent efforts to clarify the presentation and to modernize the material. Thus, theory is expanded and some newer methods are substituted for older ones. For individual methods the general form is the statement of principles and theory, the detailed operating directions, and the representative numerical problems.

The over-all emphasis remains on titrimetric and gravimetric methods, in that order. Altogether, this treatment seems conservative and sound.

Some of the definitions used do not agree with the recent recommendations of the nomenclature committee of the Division of Analytical Chemistry of the American Chemical Society; e.g., the first sentence on page 285 "ain't necessarily so," for the sample may not be weighed or dissolved, or the desired constituent separated from solution. The outline on page 393 is not sufficiently inclusive to cover a number of different kinds of methods.

The reviewer retains the generally high opinion of this book which he has held for recent editions.

Quantitative Chemical Analysis: An Introduction to the Science and Practice of Chemical Measurement. Charles W. Foulk, Harvey V. Moyer, and William M. MacNevin. New York–London: McGraw-Hill, 1952. 484 pp. $5.00.

Although this book is printed as a first edition, it brings back to the reviewer many recollections of the senior author's much earlier work. As an example, separate discussion of theory and practice is retained in the new work. Incidentally, the reviewer now accepts the soundness of this viewpoint. He cannot agree, however, with the general implications of the proposed classification of analytical methods. Nor does he believe that the process of precipitation has any essential connection with gravimetry. The former is a means of separation, the latter a kind of measurement.

The theoretical part (280 pp.) deals primarily with gravimetry (including precipitation) and titrimetry. Included also are short chapters on errors, oxidation-reduction potentials, potentiometric determination of pH, electrometric titrations, electrodeposition, and colorimetric analysis.

Most of the laboratory exercises are gravimetric or titrimetric, thus following the general pattern still popular in many institutions. The number and variety seem adequate, although admittedly no two instructors would agree on what to include in such a list. Useful items are included in the appendix.

In one form or another, much of the material in this book has been used with large classes for two to four decades. It is thus a work of proved value. In the new, expanded form, it should interest many teachers.

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Allgemeine Physiologie. Albrecht Bethe. West Berlin: Springer-Verlag, 1952. 294 pp. Illus. DM 29.70.

The author of this book is the dean of the German physiologists. In his ripe old age—he celebrated his 80th birthday a few months ago—he presents a small but rich general physiology. The subject matter of this area of the biological sciences is less well defined than that of other parts of physiology. The influence of Verworn, who tried to base a general physiology largely on the study of unicellular organisms, can be traced in Bethe's book. Other aspects, however, such as the physicochemical organization of the protoplasms, are duly emphasized—particularly permeability, vital staining, and ion effects. The relation of stimulus to excitation, bioelectricity, the general physiology of movements, the principles of nervous conduction, and of the action of hormones are also dealt with.

This is one of those rare books which the expert enjoys and which ought to be profitable for the beginner. It is well written, not overloaded with facts, and is rich in ideas. It would be highly desirable if medical students and students of mammalian physiology would first become acquainted with general physiology as discussed here before they approach the intricacies of human physiology.

Printing and binding of the book are excellent.

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Scientific Book Register

Filter Design Data for Communication Engineers. J. H. Mole. New York: Wiley, 1952. 252 pp. Illus. $7.50.

Iodine Content of Foods. Annotated bibliography 1825–1951 with review and tables. London: Chilean Iodine Educational Bureau, 1952. (Distributed by Lange, Maxwell & Springer, London.) 183 pp. 21s.

Linear Algebra and Projective Geometry. Vol. II of Pure and Applied Mathematics: A Series of Monographs and Textbooks; Paul A. Smith and Samuel Eilenberg, Eds. Reinhold Baer. New York: Academic Press, 1952. 318 pp. Illus. $6.50.

Theory of Electric Polarisation. C. J. F. Böttcher. Amsterdam–Houston: Elsevier, 1952. 492 pp. Illus. $10.00.