

of the medical student, or call for more work than he should be expected to cover in his preparation for medicine. It presents a good outline of qualitative analysis and the minimum of the theory and practice of volumetric methods which may be considered necessary to fit the student for practical applications in later years of the course. There are also sections on the analysis of water and on the detection of poisons, and a long section on the identity tests for a considerable number of organic substances. The mechanical work on the book is excellent.

J. H. LONG.

**Quantitative Chemical Analysis: Adapted for Use in the Laboratories of Colleges and Schools.** By FRANK CLOWES, D.Sc., Lond., and J. BERNARD COLEMAN, A.R.C.Sc., Dublin. 8th Ed., 565 pages. P. Blakiston's Son & Co., Philadelphia. 1909. Price, \$3.50 net.

The fact that this book has passed through eight editions (the first edition appeared in 1891) is a good indication of the favor with which it has been received. Indeed, the work is a standard in England, and here in America it has met with no small amount of success. Barring the translation of the Fresenius by Cohn, we know of no work on quantitative analysis in the English language which contains so much useful, reliable and varied information. The text of the recent edition has been thoroughly revised, the type has been reset, and many improvements and additions have been made. The subject matter is arranged in eight parts, which are subdivided into eighteen sections: Part I is devoted to preliminary and general operations, Part II to gravimetric analysis, Part III to volumetric analysis, Part IV to complex quantitative estimations, Part V to the analysis of organic substances and the methods for determining molecular weights, Part VI to gas analysis, Part VII contains the results of a number of typical analyses as well as a fine set of reference tables, and Part VIII treats of the preparation of gases, the use of compressed gases, the distillation of water, etc. It also embraces a list of books for reference.

Among the additions of new matter we note in particular a section on the analysis of oils, fats and waxes, a number of electrolytic methods for determining some of the metals, and a description of, and the directions for using, the bomb calorimeter for coal valuation.

The book has a pronounced English flavor. It is written along conservative lines, theoretical matters have been omitted, and only those methods have been described which the authors regard as truly useful and well established. From the standpoint of the reviewer there are, in certain cases, methods of separation and determination which are superior to those cited by the authors. As examples he would mention Neher's admirable method for separating arsenic from antimony, Classen's electrolytic method for separating antimony from tin, and Penfield's device

for determining water in rocks and minerals. We notice that in discussing the operation of filtration no mention is made of the Neubauer crucible. Further, the reviewer does not think that sufficient attention has been paid to the determination of silica in the silicates. The names of the discoverers of methods are only occasionally given, and no direct references to the chemical literature accompany the descriptions of processes. It is rather remarkable that in the list of books and journals Mohr's classic work on volumetric analysis and Fresenius' *Zeitschrift* find no mention. These, however, are minor shortcomings when we consider the excellence of the book as a whole. It is essentially a *practical* treatise on analysis, wide in scope, clear in its descriptions, and generally reliable in its methods. The type and paper are good, and the book is well bound. It is also provided with a good index. We welcome the appearance of this 8th edition, and take pleasure in warmly recommending it not only to teachers and students, but to analysts in general.

LEROY W. MCCAY.

**Anleitung für das organisch präparative Praktikum.** FRANZ W. HENLE. Leipzig: Akademische Verlagsgesellschaft m. b. H. 1909. 8vo. 176 pp., 43 figs.

The attempt has been made, and that quite successfully, to present each preparation not as an individual synthesis but rather as a type of a general class of reactions. This is partially accomplished by the method of presenting the experimental directions but even more by the numerous citations to the original literature discussing the typical reactions of the class of substances under discussion. It is the opinion of the reviewer that the author has made plain to the student the need for the use of the original literature and thereby there will be much less occasion for the almost universal complaint that students engaged in organic preparations do not recognize the importance of reading the original literature.

Coming as it does from Thiele's laboratory at Strassburg, one expects, and finds, it to be thoroughly up to date in the references to the theory of the reactions as well as in the inclusion of examples of the Grignard, Sabatier and other modern syntheses.

It is one of the best of the more advanced manuals and like the others (Fischer, Gatterman, etc.) it will probably give its best service when preceded by a *short* course in which the simpler preparations of the aliphatic series are studied.

RALPH H. MCKEE.

**Kolloidchemische Beihefte.** By DR. WO. OSTWALD. Volume I, Nos. 1 and 2 Theodore Steinkopff, Dresden. To subscribers of the *Kolloid-Zeitschrift* 1 M., single volumes 1.20 M.

The object of this publication is to collect together and to present as early as possible the most important general articles on colloids. This is to be a supplement to the *Kolloid-Zeitschrift*. It should enable those who wish to follow the general advance of the subject to do so without