

pharmacist are the tables of maximum doses and of newer remedies, and the glossaries of uncommon words. The various tables, including one on group doses, are convenient for review by the student. The book is printed in clear type on good paper and is of convenient size.

Typographical errors are rather numerous, even for a first edition; some of these would not readily be detected by the student, as for example on page 213, lines 6 and 13, where "sodium chlorate" is twice specified in place of "sodium chloride." Likewise on page 216 Compound Acetanilid Powder is listed as containing sodium carbonate, rather than the bicarbonate. On page 209 the synonym "I. Q. and S." is given for Elixir of Ferric Pyrophosphate, Quinine and Strychnine, rather than for the Elixir of Iron, Quinine and Strychnine as specified in the N. F. In the table of official collodions on page 292, Collodium Cantharidatum is listed, though it is no longer official, and the following N. F. collodions are omitted: Collodion of Sulphonated Bitumen; Compound Salicylic Collodion. The table of U. S. P. Solutions is omitted entirely, although a table of N. F. solutions is given. On page 307, the maximum dose of arsenous acid is given as " $\frac{1}{6}$  gr.; 0.1 Gm." rather than as " $\frac{1}{6}$  gr.; 0.01 Gm."

A historic fallacy, which originated with a prominent American pharmacist of a generation ago, is perpetuated on page 167, where it is stated that in supersaturated sugar solutions made by heat, the crystallization which takes place on cooling "usually goes beyond the point of saturation, yielding a solution less than saturated."

A desirable feature of the book is the encouragement given to direct use of the U. S. P. and N. F. by the student, by omission of the quantitative formulas of these books, the discussion being thus directed chiefly to fundamental principles and to comments.

This book will be a useful addition to any pharmaceutical book shelf, and will be of interest to those teachers who have felt that pharmacy books have been too unwieldy, with too much repetition of material which is in the U. S. P. and N. F. and which should be sought there by the student.—WILLIAM J. HUSA.

*Recent Advances in Analytical Chemistry*, Vol. II, Inorganic. By C. AINSWORTH MITCHELL, editor, and NORMAN EVERS, S. G. CLARKE, W. R. SCHOELLER, A. T. ETHERIDGE, BRYNMOR JONES, A. R. POWELL, JANET W.

BROWN and J. W. H. JOHNSON, contributors. Published by P. Blakiston's Son and Co., Inc., Philadelphia, 1931. XIV + 452 pages, 26 illustrations. Price \$3.50.

The literature pertaining to advances in analytical chemistry increases so rapidly that it is impossible for the busy analyst to keep informed of progress except in a very specialized field. This volume prepared under the editorial direction of one so well qualified as the editor of *The Analyst* and contributed to by a number of experts in restricted fields should be of value to all persons engaged in practical analysis or in the teaching of analytical chemistry. Considered in conjunction with Volume I published in 1930 and dealing with recent advances in analytical organic chemistry, the work comprises a comprehensive survey of the progress made in the development of qualitative and quantitative methods during the past ten years. In many cases, concise working directions of new methods are given.

The subject matter of the book is subdivided into 16 chapters. Thirteen chapters are given over to the consideration of the detection and determination of the common and rare elements and gases. One chapter is devoted to each of the following subjects: Hydrogen-ion concentration, microchemistry, and water and sewage analysis. In the chapter on microchemistry, the progress in the analysis of inorganic as well as organic substances is reviewed. In the chapter on water and sewage analysis, an extended list of the botanical and zoölogical organisms in relation to pollution is given which is probably more complete than any such list found in references written in the English language.

Working details of new qualitative and quantitative methods are not given in every case, but a critical survey of published work is presented with very numerous references to the original literature. A bibliography is included after the consideration of each subject which might be improved by giving the name of the publisher.

The advances in analytical chemistry surveyed in this and in the preceding volume are made available in convenient form and at an opportune time for study by those engaged in the revision of the chemical monographs of the United States Pharmacopœia and of the National Formulary.—GLENN L. JENKINS.

*Quantitative Chemical Analysis, an Intermediate Textbook*. By FRANK CLOWES and J.