

intelligible to a beginner, who is plunged *ab initio* into a subject which he really cannot understand without the application of this law, by means of which the whole subject may be made beautifully clear and simple.

From the purely analytical point of view, the most interesting contribution by Böttger is the use of a systematic grouping of anions through the solubilities of the barium, lead and silver salts. For those who still favor the converting of the acids into soluble alkali salts as preliminary to the acid analysis, this grouping will probably prove welcome. In the experience of the writer, the change into alkali salts is subject to so many complications and exceptions and the gain by such a grouping is often so small, that it has been discarded except for the so-called "insoluble" (in acid) unknowns and all tests for acids, group and individual, are now carried out in *acid* solutions, without removing the cations: most of the important acid tests are, as it is, carried out in acid solutions and the results of the analysis for metal ions, with the solubilities of solid unknowns and the reaction of solutions, will usually give very considerable information as to what groups of acids may be present.

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PRACTICAL PHYSIOLOGICAL CHEMISTRY. BY PHILIP B. HAWK, Demonstrator of Physiological Chemistry in the Department of Medicine of the University of Pennsylvania. pp. 416. Price \$4.00 net. P. Blakiston's Son & Co., Phila.

This book is a combination of a laboratory manual and a text book. Attention is given in the main to the practical side of the subject but enough facts are introduced to make the outlined experiments intelligible. A new feature that has been introduced is a detailed study of the feces. One of the best points connected with this volume is the large number of beautiful illustrations of crystals and various pieces of apparatus.

F. P. UNDERHILL.

AUSFÜHRLICHES LEHRBUCH DER PHARMAZEUTISCHEN CHEMIE, BEARBEITET VON DR. ERNST SCHMIDT, Ordent Professor der Pharmazeutischen Chemie und Director der Pharmazeutischen-Chemischen Instituts der Universität, Marburg-Erster Band, Anorganische Chemie, Erste Abteilung; Mettalloide Fünfte vermehrte Auflage. Viewig u. Sohn, Braunschweig, 1906. pp. 528. Ladenpreis: geheftet Mark 10.

For years past this book has occupied a unique place as a treatise on chemistry and although entitled Pharmaceutical Chemistry and containing much that is useful to the pharmacist it is really a book of the greatest value to chemists in general. As a book of reference it is of especial value as it contains a vast amount of information and is somewhat unique in that not a little part of the information is of the uncommon sort that one is not apt to find included in a single book. The part under review is the first section of the first volume of the fifth edition which comprises the

metalloids. The sections that are to follow will doubtless be of equal excellence.

JOHN MARSHALL.

FOODS AND THEIR ADULTERATION. Origin, Manufacture and Composition of Food Products. Description of Common Adulteration, Food Standards, and National Food Laws and Regulations. By HARVEY W. WILEY, M.D., Ph.D. Price \$4.00. Octavo, 625 pages. P. Blakiston's Sons & Co., Philadelphia.

With the widespread interest given to Foods, not alone by the scientists and manufacturers and distributors, but also by the legislators and consumers, no time is more appropriate for the appearance of an authentic manual on this subject, than the present. It is fortunate for the American consumers that a treatise has appeared, written by such a well known and highly recognized authority as Dr. Harvey W. Wiley, Chief of the Bureau of Chemistry, U. S. Department of Agriculture.

Dr. Wiley divides his subject matter into three classes:—Foods, beverages and condiments. Foods and condiments are considered only in this the first volume, and beverages will be taken up in the second volume, now in active preparation. Milk is included among the foods, as the author very correctly states: "Milk, although a liquid substance, is hardly to be considered a beverage, and on account of its high properties may be classed, together with its preparations, under the first head."

Analytical chemical methods and detailed figures of analyses are intentionally omitted, although in every case the average chemical composition of each class is given. This is a distinct advantage, making the manual more concise, especially also as the manual is designed—"to interest the consumer, as well as the manufacturer, the scientific, as well as the general reader."

The different products are treated under the following sub-divisions: Introduction: A brief outline of Proper Ration, Social Function of Food, Definition, Composition and Classification, and Explanation of some of the more Common Chemical Terms.

- Part 1—Meats and Meat Products.
- Part 2—Poultry and Eggs and Game Birds.
- Part 3—Fish Foods.
- Part 4—Milk and Milk Products and Oleomargarine.
- Part 5—Cereal Foods.
- Part 6—Vegetables, Condiments, Fruits.
- Part 7—Vegetable Oils and Fats, and Nuts.
- Part 8—Fungi as Foods.
- Part 9—Sugar, Sirup, Confectionery, and Honey.
- Part 10—Infants' and Invalids' Foods.

The space allowed the reviewer is too limited to allow him to go into detail as to any part of this excellent manual. Every part is written in the characteristic plain and forcible style of the author, showing complete