

A German translation, by Wolffenstein, was published in Berlin in 1891, with a second edition of 444 pages in 1900. An English translation is, indeed, desirable and will be of much service.

Text-books of organic chemistry, both those in English and those in German, with the exception of one or two of the larger treatises, dispose of the alkaloids in few words, as though they were not covered by systematic studies of chemical constitution. In fact, however, the literature of their synthetic chemistry is too extensive and too recent to summarize. In Beilstein's volume III, 1897, there are 200 pages upon vegetable alkaloids, literature closely related to that of the nitrogen bases at large, of which there are 1800 pages in volume IV, 1898.

In its scope this work is confined to chemical constitution, and, as introductory to the vegetable alkaloids, "artificial bases closely related to the natural alkaloids" are presented in a "First Part" of 107 pages. The treatment is not so comprehensive and philosophical as Guareschi's "Vegetable Alkaloids and Ptomaines," translated in German by Kunz-Krause, and published in Berlin in 1896. Nor is the discussion of leading researches so much extended as in the briefer monograph of Julius Schmidt upon "The Synthesis of Alkaloids" (232 pages). 1900: Stuttgart. Pictet's work is, however, adapted to more general usefulness, probably, than either of the works above named. With them it makes a good companion to the new compilation upon "Der Stickstoff und seine wichtige Verbindungen," by Leopold Spiegel.

Dr. Biddle has added a considerable number of references to literature later than the date of the second French edition of Pictet, in some cases later than the issue of the second German edition. Both he and the publishers deserve the thanks of the chemical public for making this work accessible in English.

A. B. P.

**A METHOD OF IDENTIFICATION OF PURE ORGANIC COMPOUNDS.** BY SAMUEL PARSONS MULLIKEN, PH.D. New York: John Wiley & Sons. Vol. I. Lg. 8vo. 264 pp. Price, \$5.00.

The volume before us is the first of a series of three volumes which will treat, respectively: (1) Hydrocarbons and oxygen derivatives; (2) nitrogen compounds of carbon; (3) compounds containing other elements besides those named. It is a qualitative analysis of pure organic compounds and gives systematic study to

some 2300 compounds containing carbon, hydrogen and oxygen. As a preparatory piece of work, methods are given for the qualitative detection of the various elements which may be contained in organic compounds. Some of these methods are novel and may be useful in general analysis, for example, the use of fluorescein paper to detect bromine. By these tests the compound is referred to its proper general group or order, each of which is to be treated in a separate volume. The substances treated in this volume are under Order I. They are divided into two sub-orders, colorless and colored substances. The first sub-order is divided into several genera, *viz.*, aldehydes, carbohydrates, acids, phenolic compounds, esters, acid anhydrides and lactones, ketones, alcohols, hydrocarbons. A substance is placed under one of these generic heads by chemical tests, which are systematically applied in a fixed order. The species in these genera are fixed approximately by melting- and boiling-points, and particular substances identified, in many cases, by special tests. Color reactions are made definite by color charts appended.

While the practicability of any such analytical scheme can only be decided by use in the laboratory, the apparent care with which every detail has been worked out lead to confidence in the method. The book will certainly be a valuable one for any chemist to have, both for its analytical uses and for the classified knowledge it contains. It would seem that it might well have an important place in long courses of organic chemistry. Inorganic qualitative analysis serves a good purpose in general training by giving students, who have had elementary and theoretical chemistry, a basis of experience which leads to definite results and consequent trust in themselves and in chemistry. In the same way such a course of organic qualitative analysis may serve to crystallize the general ideas previously obtained, and stimulate to further study by suggesting knowledge which the student may find in detail by reading the original literature.

H. W. HILLYER.

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#### ERRATA.

In the paper by F. P. Veitch on "Soil Acidity," in the June number:

On page 661, last paragraph, third line, *for* milligrams, *read* tenths milligram.

On page 662, first line, *strike out* " of 10 grams each."