

well compiled and will doubtless satisfy the needs of those for whom it is intended. The portion devoted to pharmaceutical assaying would be much improved by including the simple and accurate processes of liquid percolation introduced by Hulsebosch and modified by Schwickerath and others, in which the so-called perforator is used.

J. H. LONG.

LABORATORY INSTRUCTIONS IN GENERAL CHEMISTRY. ARRANGED BY ERNEST A. CONGDON. Philadelphia: P. Blakiston's Son & Co. 1901. 110 pp. 8vo. Illus.

The 262 experiments herein described accurately, yet tersely, range from the simplest demonstrations of physical and chemical changes, through the isolation and study of the non-metals (so far as convenient for beginners) up to those dealing with the law of the conservation of matter, the laws of Lavoisier, of Dalton, of Charles, of Boyle, and of Gay-Lussac, and concluding with methods of determining molecular and atomic weights. Throughout the book, the experiments seem to be well graded, carefully chosen, and adequately described; many are elucidated by illustrations of well arranged apparatus.

The material is largely original, and the author has had ten years' experience in testing his exercises as professor in the Drexel Institute, Philadelphia. The present writer would suggest that the introduction sparingly of stoichiometrical examples might strengthen the educational value of this excellent laboratory guide. The book can be used in connection with any standard text-book. Nearly every experiment is followed by queries intended to make the students think for themselves, and the blank pages with which the book is interleaved furnish opportunities for recording replies, as well as the results obtained.

Students pursuing the course herein outlined, will be well prepared to take up the study of qualitative and quantitative analysis.

HENRY CARRINGTON BOLTON.

AN INTRODUCTION TO MODERN SCIENTIFIC CHEMISTRY, in the form of popular lectures suited for university extension students and general readers. BY LASSAR-COHN. Translated from the second German edition by M. M. PATTISON-MUIR. New York: D. VanNostrand Company. 1901. 348 pp. 12mo. Illus. Price, \$2.00.

The plan of this book is well conceived and the subject is skillfully presented; being in the form of popular lectures the style is rather diffuse, though perhaps not more so than necessary for

the comprehension of the class of readers to which the book appeals. The author opens with a discussion of the bearings of physics and of chemistry, and illustrates by describing the distillation of water, and the union of iron with sulphur. We think the definition of chemistry, as given on page 4, rather awkwardly expressed, and liable to the interpretation that it includes, in part, facts that belong to physics.

After making the reader familiar with the practical operations of preparing and examining hydrogen, chlorine, and the other elements of this group, the subjects of atoms and their weights, formulæ, molecules and their weights, and very simple calculations on stoichiometrical principles, are introduced; this postponement of theoretical questions until after certain phenomena have been studied is advantageous. Then follows the study of oxygen, sulphur, and so on. In the chapter on carbon, the student is gently led into the field of organic chemistry, which is exploited only briefly, yet he becomes acquainted with the classification of hydrocarbons, the signification of isomerism and the "chemistry of rings."

In this way, the student insensibly gains some conception of organic chemistry before the term itself is used, and is ready to appreciate the few pages on chemistry of organized substances. Only forty pages are given to metals, and the book closes with an exposition of the periodic law.

A feature of the book is the absence of dogmatic assertions and the continuous introduction of reasoning. Teachers will do well to give the book a trial. The translation bears marks of haste or carelessness. Witness the following phrase: "That apparatus suffices for quite a few purposes only," and the English sentences on several pages. The make-up of the book is excellent; the illustrations are good, and the index is quite full.

HENRY CARRINGTON BOLTON.

FLESH FOODS: THEIR CHEMICAL, MICROSCOPICAL, AND BACTERIOLOGICAL EXAMINATION. BY C. AINSWORTH MITCHELL. London: Charles Griffin & Co., Ltd.; Philadelphia: J. B. Lippincott Co. 1900. xv+336 pp.

This book contains nothing really new or which cannot be found elsewhere in scientific literature, but it has the great merit of containing, in condensed form, methods, investigations, and tables which are scattered here and there in scientific works.

According to the preface, "It has been the author's endeavor to collect and summarize, in a convenient form, records of investi-