

gations which are, for the most part, scattered through English and foreign scientific books and periodicals, and to select such methods as appeared most suitable for the examination of meat and its preparations."

Chapters I and II have to do with the structure and chemical composition of muscles, tissues, and blood. In Chapter III, the flesh of animals which are eaten by man, including wild animals, fish, and birds, is described, giving the general characteristics and chemical composition. Next the examination of flesh, both sound and unsound, is taken up, giving methods and chemical constants. The next chapter summarizes some of the ways of preserving flesh, as by salting, drying, smoking, and by use of antiseptics. It includes several tests for antiseptics and preservatives in meat, and the examination of canned goods. One chapter is given to the composition and analysis of sausages, and one to the classification of flesh proteids. The changes due to cooking and the effects of parasites are well described. About thirty pages deal with the bacteriological examination of flesh, describing the principal bacteria which infest flesh, and giving methods for their detection. It closes by giving the best methods for the detection and separation of ptomaines.

The author refers freely to such eminent authorities as König, Chittenden, Hehner, and others.

The attempt has been made to cover such a wide field that it has been necessary to condense the matter much, but the condensation has been done very intelligently.

On the whole, it is a valuable and practical work and will be found a very useful handbook for analytical chemists.

W. B. BROWN.

A TEXT-BOOK OF URINE ANALYSIS FOR STUDENTS AND PRACTITIONERS OF MEDICINE. BY JOHN H. LONG, M.S., Sc.D. Easton, Pa.: The Chemical Publishing Co. 1900. 221 pp. Price, \$1.50.

An unusually clear and concise presentation of a well-worn subject. This manual is not only to be recommended to the student of medicine, but equally as well to the chemist and pharmacist, who will find it a great aid in the interpretation of analyses through the numerous references to clinical significance, and the appended tables, which explain in a very lucid manner the relation of pathological conditions to chemical composition. An especially commendable feature is the absence of discussions of

various complicated methods of doubtful value, which crowd many books of this class, much to the confusion of the student. We miss a reference to Howe's modification of Doremus' ureometer, which has added so much to the accuracy and convenience of urea determinations. The illustrations devoted to the microscopical examination of sediments and casts leave room for improvement, both in quality and number. The general make-up of the book is very neat.

V. COBLENTZ.

INORGANIC CHEMISTRY. General, Medical and Pharmaceutical, Theoretical and Practical. A text-book and laboratory manual in two volumes. BY OSCAR OLDBERG, PHARM. D. Chicago: Chicago Medical Book Co. 1900. xx + 1177 pp. Price, \$7.00.

Volume I is theoretical and descriptive, being divided into three general parts, of which 314 pages are devoted to theoretical chemistry, 150 to the elements and 33 to stoichiometry. Chemical theory is treated in a very thorough and ingenious manner; however, much of this matter could be more readily grasped by the student if classified under the study of the several non-metallic elements. The employment of *approximate* atomic weights, selecting, for example, such values as 120 instead of 120.4 ($O = 16$) for antimony and 206.5 instead of 206.9 ($O = 16$) for lead, is not advisable in a text-book of chemistry, for it not only adds to the confusion already existing but also a promiscuous rounding off of these values for convenience sake leads to loose and inaccurate work. The chapter devoted to the periodic system is excellent.

Volume II is more properly a laboratory manual, the first part covering general chemical and pharmaceutical operations, while the second gives working methods for the preparation of 500 pharmaceutical chemicals. No general acknowledgment is made as to the source of the majority of the illustrations.

The work is eminently practical and sufficiently comprehensive to fulfil the requirements of the student and practical pharmacist. The printing and binding is excellent and reflects credit on the publishers.

V. COBLENTZ.

HANDBOOK OF PRACTICAL HYGIENE. BY D. H. BERGEY, A.M., M.D. Easton, Pa.: The Chemical Publishing Co. viii + 164 pp. Price, \$1.00.

This small work of about 160 pages, to quote the author's preface, is due to "the lack of a convenient handbook for the guidance of students in the sanitary analysis of air, water, soil,