

will run parallel to any of the lines of classification along which the subject of organic chemistry is generally developed.

As stated before, however, since the book aims to cover only a special field and is designed primarily for "home consumption," the above criticisms should not be construed too harshly. There are, on the other hand, many excellent features. The preparations selected are typical, the details are given clearly, and much more space is properly accorded characteristic reactions and analytical tests than is customary in such books. The book is in attractive form, and the proof has evidently been read with great care.

MARSTON TAYLOR BOGERT.

Practical Methods for the Iron and Steel Works Chemist. By J. K. HEES, PH.C., Chief Chemist for the Carnegie Steel Company, New Castle, Pa. pp. 60. Easton, Pa.: The Chemical Publishing Co. 1908. Price, \$1.00.

The author has compiled from various sources, methods for the analysis of such materials as iron ores, coke, coal, slags, irons and steels, fire-bricks, cements, boiler waters, fats, bearing metals, and chimney and producer gases. These have been modified to conform to his experience and it is stated that all procedures have been carefully tested, and that the directions as given are intended particularly as a guide to analysts of limited experience. For such readers the author also describes some of the essential features of a works laboratory, and gives directions for the general conduct of laboratory work, the preparation of reagents, or standards, and adds a collection of useful tables.

In his endeavor to make this a "practical" manual, the author has made his directions so concise as to approach, if not to pass, the danger point, especially in a work designed for inexperienced analysts. The volume is of interest as an expression of opinion on the part of one who is familiar with the demands made upon the laboratory of an iron or steel works, regarding methods best adapted for use in such a laboratory.

H. P. TALBOT.

A Laboratory Outline for Determinations in Quantitative Chemical Analysis. By ALBERT F. GILMAN, S.B., A.M., Professor of Chemistry, Ripon College. pp. 88. Easton, Pa.: The Chemical Publishing Company. 1908. Price, 90 cents.

The procedures described include a considerable range of gravimetric analyses and the volumetric determination of iron by the permanganate, dichromate, and stannous chloride methods. Each procedure is accompanied by a series of questions to be answered by the student, and a page upon which it is apparently intended that the student shall record his observed data.

It is, unfortunately, impossible to commend this little volume. It is badly written, the procedures are not accurately described, and many of them are unreliable, as the author states with singular frankness but