BOOK NOTICES AND REVIEWS.

Studies on Oxidation Reduction IX: A Potentiometric and Spectrophotometric Study of Meriquinones on the p-Phenylene Diamine and the Benzidine Series. By W. Mansfield Clark, Chief of the Division of Chemistry, Barnett Cohen, Chemist and H. D. Gibbs, Senior Chemist, Hygienic Laboratory, U. S. Public Health Service, Treasury Department. Being Supplement to Number 54 of the Public Health Reports.

A brief abstract by Dr. Mansfield Clark states:

This is the ninth of a series of papers dealing with the exchange of electrons between different forms, the so-called reduced and the so-called oxidized forms, of organic compounds. In the present study measurements were made with members of the para phenylene diamine and the benzidine series. Such compounds, when partially oxidized, give brilliant colored products (called meriquinones), resulting from an extraordinary type of union between the reduced and the oxidized forms.

These colored products are used in a variety of biochemical tests and the purpose of the paper was to define quantitatively the conditions under which biological solutions can force the electron exchange to the degree necessary to reveal the color. By means of electrometric measurements the required potential was determined in each instance. Also the strength of each compound, as a base, was determined. The results harmonized with a rationally developed equation. This equation was found to lead to certain consequences which were roughly confirmed by spectrophotometric measurements.

Two practical conclusions were reached. The first is, that the complicated nature of the color production has been quantitatively outlined for the first time and, by means of the methods described, it should be possible for the organic chemist to solve many of the difficulties encountered. The second is, that these systems, which hitherto have been repeatedly studied by empirical methods in an effort to improve the biochemical tests in which they are used, should be rejected as too complicated for practical use.

Lehrbuch der Physiologischen Chemie, unter Mitwirkung von Prof. S. G. Hedin in Upsala, Prof. J. E. Johansson in Stockholm und Prof. T. Thunberg in Lund, herausgegeben von Olof Hammarsten, ehemal. Professor der Medizinischen und Physiologischen Chemie an der Universität Upsala. 11 te völlig umgearbitete Auflage. Lex. 835 pp. MK. 29.40. Verlag von J. F. Bergmann, München.

Just off the press is the 11th edition of this masterwork. Olof Hammarsten is unquestionably the master of Physiological Chemistry and also the nestor of Biochemistry, being born in 1841. Truly no one but a descendant of the sturdy and hardy norsemen would undertake the revision of a book at the age of eighty-five. We all owe him a great debt of gratitude for his painstaking work for so many years.

Workers in Biochemistry are to be congratulated on the publication of the new—the eleventh—edition of Hammarsten. Among the 18 chapters I will mention the following: II, The Proteins; III, The Carbohydrates (Hedin); V, The Blood; VII, The Liver; IX, The Digestion (Hedin); XIII, The Organs of Generation (Hedin); XIV, The Milk; XV, The Urine; XVII, The Respiration and Oxidation (Thunberg); XVIII, The Metabolism (Johansson).

The last chapter has been completely rewritten by Prof. J. E. Johansson of the University of Stockholm, who presents entirely new views on Metabolism. The Chapter is subdivided into Foods, Malt Beverages, Wines and Spirits and Foods as carriers of Vitamins.

Chapter XV, on Urine, is an excellent treatise of 131 pages. It is subdivided into: Physical Properties, Organic Physiological Constituents (64 pages), Inorganic Constituents, Quantitative Analysis, Casual Urinary Constituents, Pathological Constituents, Sugar and Urinary Sediments and Calculi. This chapter alone is worth the price of the entire book.

A chapter of Additions, bringing the work up-to-date and a detailed Author's Index and Subject Index, conclude this masterwork. The study of "Hammarsten" is not only a necessity for the physiological and bio-chemist, but also to the scientific pharmacist who takes an interest in his profession.

May this book remain the "masterwork" and let us hope that Prof. Hammarsten will live to see the twelfth edition.—OTTO RAUBENHEIMER, Ph.M.

Die Praxis des Organischen Chemikers. Von Dr. L. Gattermann, 19, vollständig neu bearbeitete Auflage von Dr. Heinrich Wieland. Octavo, 379 pp. mit 52 Abbildungen in Text.