statement of the purposes of the "Association of Laboratory Directors, etc.," and the regulations adopted to govern examinations for diploma and doctor's degree. F. H. THORP.

LABORATORY WORK IN PHYSIOLOGICAL CHEMISTRY. BY FREDERICK G. NOVY, Sc.D., M.D., Junior Professor of Hygiene and Physiological Chemistry, University of Michigan. Second Edition, Revised and Enlarged. Ann Arbor: George Wahr. 1898. pp. 326. Price, $2.00.

The second edition of this work is wholly rewritten, and is practically a new book. It contains directions for laboratory work covering the various food-stuffs and the fluids and secretions of the body, together with brief explanatory descriptions of these substances, and is designed to guide the student in the experimental study of chemistry in its broad relations to physiology, hygiene, and disease. In the latter part of the work, about sixty pages are devoted to quantitative analysis. The experiments and subject-matter are well selected and concisely described without omitting important details. The course may be covered by a class devoting a half-day, daily, for three months to the work. The book will be found useful both in undergraduate college courses and in the medical school where a well-equipped laboratory is at the command of students and teacher.

A noticeable defect in the application to clinical use of the methods taught is the omission of definite information regarding physiological variations. Thus, on page 295, we read, "There is an excess of phosphates in the urine in inflammatory diseases of the nervous system and in rickets and osteomalacia. There is deficiency in indigestion and in structural diseases of the kidney;" and again, "A quantitative analysis will show the presence of an excess or deficiency of phosphates." In describing phosphoric acid in urine, the text states "On an average 2.5 g of P_2O_5 are excreted per day." What variation, then, from this amount is to be considered an excess or deficiency? The author does not state. If the determination is to serve any practical purpose, evidently some more definite method of interpretation of the result obtained must be available. This is likewise true of the amounts of the constituents of the gastric juice, breast milk, etc., as well as of urine. Information along these lines is looked for and best taught with the technical methods to be employed.

Prof. Novy's work marks a distinct advance in a field, the

future of which is as promising as that of any department of experimental physiology and medicine. His work is a foremost laboratory guide in a subject demanding a place in the curriculum of every medical school which undertakes to instruct its students in the technic of modern scientific medicine.

E. E. SMITH.

ELECTROLYSIS AND ELECTROSYNTHESIS OF ORGANIC COMPOUNDS. By DR. WALTHER LÖB, Privatdocent in the University of Bonn. Translated by H. W. F. LORENZ, A.M., Ph.D., Graduate of the University of Berlin. New York: John Wiley and Sons. Price, $1.00.

This unpretentious little volume gives, in the space of about 100 pages, what may be fairly termed the substance of all that has been accomplished by the electric current in the domain of organic chemistry. The most recent views in regard to reductions and oxidations are given in sufficient detail to satisfy the inquiring student. The first half of the book considers the aliphatic compounds, the second half the aromatic derivatives. It must be remarked, however, that the completeness of such works as those of Tommasi and of Peters is not found here, although the essentials and the latest results are everywhere present. It is a most suggestive compilation and the student, eager to take up problems in this comparatively new field of research, will find hints upon almost every page as to lines of investigation, which would amply repay his experimental inquiries. Not as a criticism, but simply to arrest an erroneous notion the reviewer would call attention to a statement made on page 18, relating to the electrolysis of metallic acetates. It is there said of uranium acetate that from its solution the current separates the metal, which passes to the anode. This is wrong. Metallic uranium cannot be obtained in this way. It is the hydrate which is deposited at the cathode. Again, on page 25 occurs the sentence "on this property depends the great importance of oxalic acid in quantitative electrolytic analysis, into which it has been introduced by Classen." Would it not be just as well to credit Parodi and Mascazzini with having first applied oxalic acid in this way? They first used this acid in the electrodeposition of iron, after which Classen extended its use by the elaboration of methods for the electrolytic determination of other metals. The closing paragraph of the book calls attention to the "important