ELEMENTARY MANUAL FOR THE CHEMICAL LABORATORY. BY LOUIS WARNER RIGGS, PH.D. New York: John Wiley and Sons. 1904. vi + 138 pp. Price, $1.25.

This manual is "the author's attempt to answer the much debated questions: What subjects shall be taught and how shall they be presented in a one-year course in chemistry"? It is assumed "that there shall be at least sixty hours of recitation work and one hundred and twenty hours of laboratory practice."

Forty-two pages are allotted to general chemistry, including the study of twelve non-metals and five metals with some of their compounds. Thirty-nine pages contain more than thirty exercises in volumetric analysis, while qualitative analysis is taught in fifty-two pages. The complete gravimetric analysis of crystallized magnesium sulphate is the only one of its kind. The book not only contains directions for laboratory practice, but indicates, also, under the rubric, "Text-book Lesson," the topics which the student is expected to prepare for recitation, by studying any "large-sized standard text-book." The modern theory of solution is brought early to the attention of the student and its teachings are followed consistently. It is clear that mastery of the work laid out in this manual will insure the acquisition of more chemistry than one can usually crowd into a one-year course, but it is not so evident that the questions, which led to its preparation, have been satisfactorily answered. L. B. HALL.

A LABORATORY MANUAL OF ORGANIC CHEMISTRY FOR BEGINNERS. BY PROFESSOR DR. A. F. HOLLEMAN. Translation from the Dutch by DR. A. JAMIESON WALKER. New York: John Wiley and Sons. xiv + 78 pp. Price, $1.00.

This book was originally written as a practical complement to the lectures on organic chemistry given in the Universities of the Netherlands. It contains concise directions for more than three hundred experiments to illustrate properties, reactions, and general principles connected with the chemistry of the more important carbon compounds. It is a comprehensive introductory guide to laboratory work for the general student, and not essentially a handbook of "Organic Preparations." The experimental directions, although in a few instances less detailed than might be desired, are usually clear and sufficiently definite to be easily