

plete. Physical constants of inorganic (120 pp.) and organic (120 pp.) compounds give a judicious selection of substances and data. Definite values for solubilities are often given, in place of the vague statements of *the Chemiker Kalender*. In the specific gravity tables (60 pp.) the values are expressed in accordance with American standards, where there is any difference. It is a pleasant surprise to find that the serious hypertrophy in the region of thermochemical data, of which the German work is a victim, has been avoided, these data being confined almost entirely to matters of practical value and compressed within 10 pages. The values are given in British thermal units, as well as in calories. A classified list of important investigations in all branches of chemistry published during the past two years (48 pp.) and a classified list of books on chemistry issued during the same period (28 pp.), together with an index, complete the volume. The smaller tables, which include one of five place logarithms, are too many to be enumerated here. The book is convenient (small 8vo.) in size and the typography is beyond reproach. The editor says, "the attempt has been made to select and tabulate only that which is of fairly general interest and utility." In this attempt he has succeeded admirably. The book should be daily in the hands of every American chemist.

ALEXANDER SMITH.

A PRACTICAL HANDBOOK ON THE DISTILLATION OF ALCOHOL FROM FARM PRODUCTS, INCLUDING CHAPTERS ON ALCOHOLOMETRY, AND THE DENATURING OF ALCOHOL. BY F. B. WRIGHT, NEW YORK. SPON & CHAMBERLAIN, 1906. (pp. VIII + 194.) PRICE, \$1.00.

The author states that this book was written in answer to the increased desire for information on the subject consequent upon the passage of the "Denatured Alcohol Act" by Congress. It contains chapters on fermentation, distillation, production of alcohol from potatoes, grain, beets and molasses, alcoholometry, denaturing, etc. The text is illustrated with outline cuts, and the book is neatly printed and bound.

The chapter devoted to alcoholometry figures Syke's hydrometer, the official instrument used in England, and states that Dica's hydrometer (copper with poises and thermometer attached), is used in America. I doubt if many American chemists have ever seen this form of hydrometer.

The chapter dealing with the denaturing and use of alcohol in Europe is carelessly compiled and contains numerous inaccuracies. The United States law and regulations are correctly quoted in the chapter devoted to that purpose.

C. A. CRAMPTON.

SCIENCE IN SUGAR PRODUCTION. AN INTRODUCTION TO THE METHODS OF CHEMICAL CONTROL, BY T. H. P. HERIOT. ALTRUICHAM, ENGLAND. NORMAN RODGER, 1907. Price, 6 shillings, net.

The specific object of this book, as succinctly stated in the preface, is "to bring the methods of science within easy reach of the practical sugar-

maker." The work is essentially a resumé of a series of articles which appeared in the *International Sugar Journal*.

Introductory remarks on the meaning of chemical control, on the role of the chemist in the sugar industry, and on chemical control without a chemist, are followed by a detailed discussion of the practical methods of the chemist, and of simple methods of chemical control.

The author clearly outlines and explains the value of a chemist's service on a plantation; to use his own words: "the chemist's duty is to acquire knowledge in the laboratory in order that he may advise in the factory. 'Nigger-driving requires no technical skill, and may be better performed by others.'" And again, in speaking of the importance and need of soil-analysis, etc., Heriot says: "The delicate balance of the chemist is less liable to err than the planter's judgment."

The book is primarily intended for use in tropical and sub-tropical countries and preference is expressed for Brix hydrometers graduated at "a mean tropical temperature of 84° F." It is therefore rather surprising that no reference is made to the important influence of temperature conditions in the graduation and control of polariscopes, a matter so fully discussed within recent years by the International Commission for Uniform Methods of Sugar Analysis.

It would also have been well to have mentioned (p. 57), that the normal weight of sucrose there cited, 26.048 grams, must be dissolved up to 100 *Mohr* cubic centimeters, even if the author should deem it best to make no reference to the equivalent sucrose solution—the normal sucrose solution now in general use, prepared by dissolving 26.000 grams of sucrose up to 100 metric cubic centimeters.

The meaning of the term "Non-chemical sugar" (p. 72) is unknown to the reviewer; if it be intended as an equivalent for "Organic non-sugars," the term is certainly open to criticism.

The chapter in the optical test is exceptionally well written, the author has certainly succeeded in giving a most lucid popular exposition of polarized light and of the polariscope. In fact the style of the book is good throughout—clear and concise, and the volume should certainly appeal to the practical man, to "the practical sugar man," for whom it is, in the first place, intended.

F. G. WEICHMANN.

THE VALUE OF PURE WATER, GEORGE C. WHIPPLE, JOHN WILEY & SONS, PRICE \$1.00.

This book is a timely contribution to the ethics as well as the economics of municipal undertakings. Responsibility for dangerous sanitary conditions is fast being placed where it belongs—upon that portion of the community which knows the remedy whether it be legal or educational.

This little book with its clear and convincing statement, its suggestive statistics, its rating of the financial value of human life should be in the