

of the material is available if some one of the readers wishes to undertake the experiment.

#### Summary.

Fibrin has been prepared from the blood of cattle, sheep, and swine, and the nitrogen distribution determined by Van Slyke's method. No differences significantly greater than the expected experimental errors were found. It would thus appear that fibrin from any of these sources can be used interchangeably in experimental work without invalidating the results. Whether or not this is true for fibrins from other sources remains still an open question.

ST. PAUL, MINN.

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#### NEW BOOKS.

**Some Compounds of Boron, Oxygen, and Hydrogen.** By MORRIS W. TRAVERS, D.Sc., F.R.S., N. M. GUPTA, B.Sc., AND R. C. RAY, M.Sc. London: H. K. Lewis & Co., Ltd., 1916. Pp. 48. Price, 1/-.

This little book contains an account of work done by its authors upon the products of the reaction of magnesium boride with water. The substances analyzed and otherwise investigated include  $Mg_3B_2(OH)_6$ , the main product of the reaction, two lower oxides,  $B_2O_2$  and  $B_4O_6$ , and soluble compounds like  $3H_6B_2O_2 \cdot 2(MgO \cdot H_2O)$ .

Further work remains to be done upon these compounds, and since the authors do not expect to have sufficient time at their disposal in the near future they express the hope that others will feel induced to take up the investigation.

JOEL H. HILDEBRAND.

**The Nature of Solution.** By HARRY C. JONES. D. Van Nostrand Co. 1917. Pp. xxiii + 380. Price, \$3.50.

This book, written by Professor Jones during the last summer of his life, is in essence a memorial volume, brought out under the supervision of some of his colleagues at Johns Hopkins University; there is a brief biographical sketch, and portrait, of the author, and a bibliography of his articles and books, comprising about 150 separate titles. According to the preface, "The present work is not a text-book, but a general discussion of some of the more important properties of solutions, true and colloidal. It is therefore written in a non-mathematical, indeed, largely in a semi-popular style." Its scope may perhaps best be indicated by the chapter headings: Importance of Solution (19 pp.); Earlier Views as to the Nature of Solution (31 pp.); Osmotic Pressure (23 pp.); Relation between Solutions and Gases (9 pp.); Electrolytic Dissociation (8 pp.); Diffusion (13 pp.); Depression of Vapor Tension of Solvent (19 pp.); Depression of Freezing Point (14 pp.); Electrolytes (20 pp.); Some Electrical Properties of Aqueous Solutions (46 pp.); Solution in Non-Aqueous and Mixed Sol-

vents (24 pp.); Colloidal Solutions (73 pp.); Solid Solutions (7 pp.); The Newer Hydrate Theory (21 pp.); Solvate Theory of Solutions (31 pp.). The relative emphasis laid upon different aspects of the general subject in a book dealing with the nature of solutions depends upon the predilection of the particular author; that of Professor Jones was the solvate theory of solutions to which, indeed, practically all of the vast amount of work he undertook was closely related, and accordingly he deals largely with that aspect of the subject. In brief, this book is a witness to the zeal of its author, and may be commended as a very readable account of the well-known work on solutions which has been carried out at Johns Hopkins University.

JOHN JOHNSTON.

**The Microscopy of Vegetable Foods.** By ANDREW L. WINTON, Ph.D. In collaboration with DR. JOSEF MOELLER and KATE BARBER WINTON, Ph.D. Second Edition, XIV. 701 pp.; 635 figures. Price, \$6.50.

With the growing importance of microanalysis as an aid to food analysts there came to be needed a comprehensive, reliable treatise covering this field of study. To fill this need "Mikroskopie der Nahrungs- und Genussmittel aus dem Pflanzenreiche," published in 1905 under the authorship of Dr. Moeller in collaboration with Dr. Winton, was a distinct and valuable contribution. In 1906 the English edition under the senior authorship of Dr. Winton was especially welcomed by English-speaking analysts. To the English edition had been added various portions of more or less special interest to American analysts.

The text of the second edition follows in the main that of the first one with the amplification of a few parts of it and the introduction of some new material, although there have not been sufficient changes to justify calling the new issue a revision. The amount of text has been maintained at the same size as the first edition. The numbering of the figures used in the first edition has for the most part been retained in the new edition. The need of accurate illustrations in a work of this character is well recognized and nearly seventy new cuts have been introduced, while about thirty of those in the first edition were dropped. It is believed that still more of the subject matter of the book might have been illustrated to advantage. The character of most of the illustrations leaves little in that respect to be desired, though it seems that in Part VIII the half-tone pictures are not beyond criticism. Among the new illustrations introduced should be mentioned those showing the tissues of alfalfa, certain members of the melon group, and also some of the cruciferous seeds, as well as some of the nuts. Like the first edition, it is intended as a laboratory hand-book. The subject matter is divided into ten parts.

In Part I is given a list of the equipment and reagents needed for general routine microanalysis of food products. A description of the typical histology of the more important plant parts serves as a synopsis of study

for the investigator familiar with this branch of study, though obviously in a book of this nature any extensive treatise along this line is out of place.

Part II devotes 120 pages to grains and the weed seeds, and other impurities occurring most commonly with them in commercial products.

Part III, which is devoted to oil seeds and oil cakes, is of special value to cattle food analysts.

Part IV contains a description of the most important leguminous seeds. In this part have been added the figures on alfalfa.

Part V is devoted to nuts.

Part VI is given to the study of Fruit and Fruit Products.

Part VII describes the histology of some of the more common vegetables, though the list as given might have been made to include a number of others which occur to a greater or lesser extent in modern food products.

In Part VIII nearly seventy pages have been devoted to Alkaloidal Products and Their Substitutes, such as coffee, tea, cacao products, tobacco, etc.

Part IX, on Spices and Condiments, consumes nearly 150 pages of the book, as well it might because of the importance of the subject matter.

The last portion (Part X) consists of a short chapter in which the characteristics of the principal commercial starches are discussed. It would seem that this chapter might, with advantage, have been extended to include some other varieties which, although not of great commercial importance, are occasionally met with by the microanalyst. The illustrations of this portion are not up to the high standard maintained for the most by the other figures in the book.

B. J. HOWARD.