

## NEW BOOKS.

ANALYSE DES ENGRAIS. BY D. SIDERSKY. Paris: Published by C. Beranger. 240 pp.

This little work of 240 pages was written by D. Sidersky, chemical engineer and officer of the Mérite Agricole, and one of the leading members of the Association des Chimistes de Sucrierie et de Distillerie de France et des Colonies.

The immediate cause of the preparation of the book was a resolution, proposed by M. Déhérain, and adopted at the Second International Congress of Applied Chemistry, held at Paris in 1896, to the following effect: that the different official methods for the analysis of fertilizers be collected into one publication in the French language, and that M. Sidersky be charged with this publication.

In the discharge of this office, M. Sidersky was met with a number of difficulties. Certain countries were modifying their systems and without bringing them into concordance with neighboring countries; for instance, Holland, Belgium and the Grand Duchy of Luxembourg. Switzerland had also just changed her own methods and adopted those of Germany, while in Germany even the publication of the official methods was long delayed. Meanwhile, the Third International Congress of Applied Chemistry, held in Vienna in 1898, appointed an international committee which was charged with a study of the best methods of the analysis of fertilizers and fodders, with the object of opening the way for international agreement. M. Sidersky, as well as the writer, was made a member of this commission, and the preparation of his volume was delayed until this commission reported the results of its work. This took place at the fourth congress in Paris, in 1900, where a broad basis was laid for international agreement, without entering into the details thereof. M. Sidersky has, therefore, included in his work the official methods in vogue in the countries named below, and also has included the report of the international committee, adopted at Paris, 1900. The countries whose methods are given in the report are France, Belgium, Holland, Grand Duchy of Luxembourg, Switzerland, Austria-Hungary, United States of America, Italy, and finally the data of the international commission.

In most cases a short historical sketch of the development of the official method is prefixed.

In the preparation of this report M. Sidersky had the collaboration of chemists in the different countries, and he expresses his particular thanks to Maercker and von Grueber, of Germany, Strohmer, of Austria, Peterman, of Belgium, Masson, of Belgium, Hoogewerff, of Holland, Menozzi, of Italy, Dusserre, of Switzerland, and Wiley, of the United States.

The French methods are those still in official use and adopted by the decree of the Minister of Agriculture, in May, 1897.

The methods of Belgium, Holland, and the Grand Duchy of Luxembourg are the same and, in their present form, were adopted by a commission which met at Goes, in January, 1899.

The German methods are those adopted by the Union of the German Agricultural Experiment Stations, revised up to 1898. These methods were adopted by Switzerland on the 27th of July, 1897.

The methods for Austria-Hungary were adopted at a meeting of the agricultural experiment stations of Austria-Hungary, held in Vienna the first of April, 1897.

The methods for the United States are those adopted by the Association of Official Agricultural Chemists, in September, 1895. Very few changes have been introduced in the official methods in use in this country since that time, but still some rather important ones should have been noted by the author, to whom the latest methods were sent.

No date is given for the Italian official methods, but they are published as written by Prof. Menozzi.

The methods of the international commission are those adopted at the Fourth International Congress, at Paris, in 1900.

There is no space here to enter into details of the methods in the book, except to commend the publication of these international methods in full in a convenient form for comparison. It may be said that the methods for fertilizers are now so well established that it should be entirely possible for an international method to be adopted which would be followed not only by official chemists, but all other chemists studying fertilizer materials throughout the world. A comparison of the various official methods given shows a basic agreement on principles of analysis.

A study of the different methods, however, reveals a great

difference in details. This difference, however, the international commission sought to eliminate as much as possible by the establishment of the basic principles on which the analyses should be conducted, and a reference to the various official methods for the details in each case.

This work points out in a most marked manner the functions still remaining to the international commission; *viz.*, to secure at least practical unity in details of manipulation, as well as in the principles of the analysis. M. Sidersky is to be congratulated on the effective manner in which he has carried out the instructions given him by the International Congress.

H. W. WILEY.

A SHORT MANUAL OF INORGANIC CHEMISTRY. BY A. DUPRÉ, PH.D., AND H. WILSON HAKE, PH.D. Third edition, revised and partly rewritten with special reference to the periodic law. London: Charles Griffin & Company; Philadelphia: J. B. Lippincott Company. 1901. ix + 391 pp. Price, \$3.00.

The introductory portion which precedes the description of the properties of the various elements and their compounds is very concise, and needs must be so to condense within the space of 101 pages all the general principles of chemistry, together with much information on physical and thermo-chemistry.

In Chapter VI the authors say in a foot-note: "A rapid method, not commonly known, for converting centigrade degrees into Fahrenheit degrees, is as follows: double the centigrade degrees, and subtract from them one-tenth of their quantity; to the remainder add 32, and the result is the corresponding degrees Fahrenheit."

This method while not new is very rapid, and deserves to become more widely known.

Some "Typical Elements and their Compounds" are then considered, 96 pages being devoted to oxygen, hydrogen, nitrogen, carbon, boron, silicon, sulphur, and phosphorus. The remainder of the elements are then treated according to the periodic system of classification.

The scheme followed in discussing the properties of the elements and their compounds is as follows: name; symbol and atomic weight; formula; molecular weight and percentage composition; occurrence in nature; physical properties; chemical properties; distinguishing tests; physiological action; preparation or manufacture; application; historical matter.