this true when the milk was added to the potassium sulphate and the sulphuric acid carefully poured down the side of the digestion flask, so that the liquids did not immediately mix. The violet or reddish-violet color appeared only in those samples of milk which contained the formaldehyde ; in all others caramelization ensued at once, the crystals and the liquid becoming first brown and then black.

A number of tests were made upon milk to which formaldehyde had been added, and in each case the preservative seemed to retard the oxidizing action of sulphuric acid, causing the violet coloration to appear and preventing the usual caramelization of the milk. In none of the samples where formaldehyde was added was a negative result obtained.

These trials led to the adoption of the following method for the detection of formaldehyde in samples of milk : 5 grams of coarsely powdered potassium sulphate are placed in a 100 cc. flask, 5 cc. of the suspected milk distributed over it by means of a pipette and 10 cc. of sulphuric acid (sp. gr. 1.84), carefully poured down the side of the flask. It is now allowed to stand quietly until the color develops. If formaldehyde is present the violet coloration of the potassium sulphate takes place in a few minutes, the color gradually dispersing through the entire liquid. If no formaldehyde be present the liquid will at once assume a brown color, rapidly changing to black. Milk which has stood for several hours previous to testing gives the reaction even more rapidly than a fresh sample.

This test is sensitive to a dilution of at least one part formaldehyde in 250,000 parts of milk.

NEW BOOKS.

QUALITATIVE ANALYSIS : A GUIDE IN QUALITATIVE WORK, WITH DATA FOR ANALYTICAL OPERATIONS AND LABORATORY METHODS IN INORGANIC CHEMISTRY. BY ALBERT B. PRESCOTT AND OTIS C. JOHNSON. Fifth Revised and Enlarged Edition, Entirely Rewritten. New York : D. Van Nostrand Co. 1901. xi + 420 pp. Price, $3.50.

So much new matter has been added to this edition of Prescott and Johnson's manual that it is almost a new work. The subject matter has been enlarged over the former edition by fully one-half, and the size of the book increased 100 pages. The introduction of a section on "Solution and Ionization" will aid teachers in making the subject clear to beginners. Much descriptive

chemistry has been introduced throughout the book, and while at first sight this may seem a little foreign to a work of this class, it must be remembered that not only will this serve the student as a review of elementary chemistry, but the knowledge given of the physical properties, such as the color and solubility of the various salts, will greatly aid him in forming his opinion as to the composition of a substance. The descriptive, as well as the analytical, matter is well arranged under a series of systematic headings, and the former is separated from the latter by the use of small type. Reactions are used throughout the book to show the changes that take place in precipitation, solution, etc., and the schemes and tables are carefully explained. The rare elements receive their share of attention, and the book is brought well up to date in the introduction of new tests. Abundant reference to the literature of chemistry makes it easy for those so inclined to go deeper into any part of the subject. The book is well printed and neatly bound. In the reviewer's opinion the manual is the most complete work on the subject printed in English, and it deserves to rank with the standard German manual of Fresenius. Whether the teacher can use it in the classroom is for each individual to decide for himself, but the book should certainly be in the library of every teacher of chemistry, and may well be in that of every professional chemist and student of chemistry.

RICHARD K. MEADE.