

It remains to be shown that the mesityl oxide formed in the first experiment was actually formed by the dehydration of diacetone. Absolutely dry acetone and purest calcium oxide were heated together in a sealed tube at $105-10^{\circ}$ for several hours and the acetone recovered entirely unchanged. When, however, a trace of calcium hydroxide was added, the product was a thick sirup of the higher condensation products. Hydroxide and acetone alone gave only acetone with a small quantity of diacetone. Hence, a definite proof has been obtained that the reaction proceeds in two stages as has been formerly shown in the case of aldehydes.

In the same way it was shown that dry mesityl oxide and acetone, or mesityl oxide alone do not react with pure calcium oxide, but do if hydroxide is present. The intermediate products in this case are still under investigation, as are the products formed in the case of the homologous ketones, as well as the product formed by the ketone with the alkali preliminary to the aldol condensation.

HAVEMEYER LABORATORIES, COLUMBIA UNIVERSITY,
NEW YORK, April 27, 1909.

NOTE.

A Useful Oil Bath.—A mixture of ten parts of refined cotton-seed oil and one part of beeswax makes a very satisfactory oil bath. It emits very little fume below 250° C. and can be used safely almost throughout the range of the ordinary mercury thermometer, having a flash point above 300° C. when heated in an open cup. A sample of hard paraffin under the same conditions flashed at 215° C.

The mixture has the advantage of the paraffin bath that it solidifies on cooling, so that there is not the liability of the oil spilling out when not in use, and it has the added advantage that it melts quickly and can be used almost immediately after heat is applied, as there is no hard cake that must first be melted as with paraffin. LOUIS W. BOSART, JR.

NEW BOOKS.

The Chemistry and Literature of Beryllium. By CHARLES L. PARSONS, Professor of Inorganic Chemistry in New Hampshire College. Easton, Pa.: The Chemical Publishing Co. pp. 180. Price, \$2.00.

Possibly no better illustration can be found of the wealth of interest which may develop in what seems an unpromising field than that furnished to the reader of Dr. Parsons' book upon the Chemistry of Beryllium.

This element, long since discovered and by no means rare in its mineral occurrence, although not generally included among the elements commonly studied, is here shown to illustrate most satisfactorily important chemical phenomena.

In the author's own words special attention is called "to the fact that a large proportion of its accredited compounds are in reality but indefinite solid solutions. This . . . is due to the abnormal extent to which its hydroxide is soluble in solutions of its normal salts giving rise to solids of almost any degree of basicity or to solutions with decreased osmotic effects."

The first chapter treats of the discovery, name, history, occurrence, and extraction as well as the detection, separation, and determination of beryllium. In the succeeding chapters the metal, its normal compounds and its acid and normal salts are discussed. The final chapter in Part I is concerned with an illuminating consideration of the basic compounds. Part II contains the bibliography.

Dr. Parsons has conferred a favor upon his brother chemists not only by placing within their easy reach the results of his own and others' investigations, but also by furnishing them with so full an index to the subject as greatly to facilitate future work along the same line.

The book may well be studied not only on account of its inherent value as a source of information regarding beryllium, but also as a model to follow in taking up the discussion of other elements.

No student of inorganic chemistry and no chemical library should fail to have it.

PHILIP E. BROWNING.

A Manual of Volumetric Analysis. For the use of Pharmacists, Sanitary and Food Chemists, as well as for Students in these Branches. BY HENRY W. SCHIMPF, Ph.G., M.D. Fifth Edition, Illustrated. 8vo, xx + 725 pages. New York: John Wiley and Sons. Price, \$5.00.

This book, which is called a fifth edition, is a revision of an earlier work by the same author, known as "A Text-book of Volumetric Analysis." As the title indicates, it has been prepared with special reference to the needs of pharmacists, and in its nomenclature and other features seems to be related to the Pharmacopoeia of the United States. This may increase the value of the book for certain classes of chemists, but it has, in turn, drawbacks. One of the most important of these is found in the use of the atomic weights based on the hydrogen standard. As the great majority of chemists employ the other tables, this catering to the pharmacopoeial usage must be considered as a decided disadvantage in the use of the book.

Besides the common and introductory processes of volumetric analysis found in most books of this class, this work contains a large number of special processes, and is unusually full on methods of drug assaying. This section seems to be well written and will appeal to all who have occasion to make such determinations. Some of the common methods employed in water analysis and urine analysis are also presented, but