

up for the enzyme which becomes inactive on account of hydrolysis, and therefore apparently accelerates the action. Heating the preparations with water hydrolyzes all of the active enzyme to inactive substance but evidently does not destroy all of the inactive zymogen present originally in the castor beans as the experiments showed a small activity of this heated material after treatment with manganous sulfate. The explanation of the results described here is, therefore, not that enzyme which had been inactivated was made active again, but that the preparation which had been inactivated still contained some zymogen from which active enzyme was again obtained.

HARRIMAN RESEARCH LABORATORY,
ROOSEVELT HOSPITAL, NEW YORK.

NOTE.

The Reaction between Calcium Permanganate and Ethyl Alcohol.—The following reaction, which was found accidentally, does not seem to be known and makes a good lecture experiment for demonstrating the oxidation of alcohol to aldehyde:

If several small fragments of calcium permanganate are dropped upon a porous plate moistened with a few cc. of ethyl alcohol, there will be a bright scintillation for an instant, and then the permanganate will be observed to glow quietly and steadily. This glowing may continue for upwards of five minutes and is accompanied by the evolution of fumes which are quite irritating to the eyes and suggestive of formaldehyde, acetaldehyde and acrolein. By drawing the fumes through warm ammoniacal solution of silver nitrate, a good reduction can be obtained, though without mirror formation.

This reaction together with that of Schwersenski and Caro¹ may be used as lecture experiments illustrating oxidation by permanganates. The specimens of methyl alcohol and acetone at hand do not react thus: isoamyl alcohol reacts somewhat less rapidly than ethyl.

F. ALEX. McDERMOTT.

NEW BOOKS.

Essentials of Chemistry. By JOHN C. HESSLER AND ALBERT L. SMITH. Revised edition (1912) by John C. Hessler. New York: Benj. H. Sanborn & Co. Price, with manual \$1.45, without manual, \$1.25.

The 1912 revised Hessler and Smith is an up-to-date, accurate textbook of chemistry, of convenient size, and excellent typography. The book presents a very large assemblage of facts whose relative importance is set forth by a liberal use of italics and several kinds of type. Numerous cross references inter-connect all parts of the text. Chapter XV on

¹ *Chem. Ztg.*, 22, 58 (1898); *Scientific American*, 1912, 225.