

rations, illustrative of some of the typical processes of inorganic chemistry for the production of various classes of compounds.

The general use of the symbol Am for ammonium throughout this and other works by the same authors seems to lack full justification, and it is still more difficult to justify such inconsistencies in symbols as AmHO, and AmOH, and  $\text{AlAm}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$ , and  $\text{MgNH}_4\text{PO}_4 \cdot 6\text{H}_2\text{O}$ , which mar the pages of this generally excellent work.

H. P. TALBOT.

THE CHEMISTRY AND TECHNOLOGY OF MIXED PAINTS. BY MAXIMILIAN TOCH. pp. xvi + 160. New York: D. Van Nostrand Co. 1907. \$3.00 net.

There is always a satisfaction in reading a book written by a practical manufacturer, whether one agrees with him or not; he at all events has something definite to say, and says it. Mr. Toch writes simply and directly about paints, their manufacture, materials and use. First there is an excellent chapter on the plan and operation of the factory; this is followed by full accounts of the pigments in practical use, which give much interesting information about the newer pigments, concerning which the English books have very little to say. These are not mere physical descriptions of the dry pigments, but include specific information as to their use and value in paint, and are illustrated by sixty microphotographic plates. Especially new are the data about sublimed lead, zinc lead white, blue lead, artificial vermillions, and the various fillers, these last being in the author's opinion entitled to much more consideration than most previous writers have accorded them. The paint vehicles are then taken up, and some special paint problems are finally discussed. In an appendix is the most recent matter about tung oil.

The author writes from the standpoint of the newer class of paint manufacturers, and sets out clearly the views held by many of the important makers, and many of the paint chemists as well. There is a chapter on analytical methods; but information of a chemical nature is scattered freely throughout the treatise.

The book is handsomely printed and is free from typographical errors of any importance.

A. H. SABIN.

PRINCIPLES AND PRACTICE OF AGRICULTURAL ANALYSIS. A MANUAL FOR THE STUDY OF SOILS, FERTILIZERS, AND AGRICULTURAL PRODUCTS. SECOND EDITION, REVISED AND ENLARGED. VOLUME I, SOILS. BY HARVEY W. WILEY, A. M., PH. D. 92 Illustrations. 18 Plates. xii + 636 pp. The Chemical Publishing Co., Easton, Pa. 1906, Price, \$4.00.

Twelve years have elapsed since the publication of the first edition of this work, and in this time much progress has necessarily been made in methods and processes. The book has been brought strictly up to date. In spite of the fact that some of the material appearing in the first edition more fittingly treated under "fertilizers" has been left out, apparently to be transferred to Volume II, its place is more than filled with new matter.