

THE MANUFACTURE OF LAKE PIGMENTS FROM ARTIFICIAL COLOURS. BY FRANCIS H. JENNISON, F.I.C., F.C.S. London: Scott, Greenwood & Co.; New York: D. Van Nostrand Co. 1900. iii + 136 pp. 16 plates. Price, \$3.00.

Mr. Jennison has written an interesting and useful book on an important industry whose literature heretofore has consisted of a few scattered chapters or an occasional paper. In the introduction, the author points out the necessity of an intelligent comprehension of the chemistry, constitution and properties of the colors and the subject is treated consistently from this standpoint. This systematic discussion of the industry furnishes a safer guide for the color-maker than empiricism. The few formulas given are types. In the author's words, "It is by far the best plan for each color-maker to carefully examine the color and devise the most rational way to produce the best results, . . . . . for what works well in one man's hands in a certain place does not, . . . . . work well with another man in another place."

Three chapters, I, II, and VII, are given to a consideration of the artificial color molecule, beginning with the general principles of synthetic chemistry; then a description of the most important classes of the colors with examples; finally, the auxochromes, salt-forming groups, absorption and the function of tannic acid and tartar emetic are considered.

"The Nature and Manipulation of Artificial Colors" is the caption of a chapter on the forms of colors as they appear in the trade with certain recommendations of particular wares of various makers.

A chapter each is given to the description of lake-forming bodies for acid and for basic colors, lake bases, red lakes, other lakes, the insoluble azo colors as pigments, the general properties of lakes, washing, filtering and finishing, matching and testing.

It is an attractive volume embellished with sixteen plates bearing slips of paper coated with lake pigments. These should have been securely gummed, for being secured at only one end they are easily disarranged. Misprints are rather numerous and some astonishing errors are noted: as, "normal hexane,  $\text{CH}_3\text{CH}_2\text{CH}_2\text{-}$

$\text{CH}_2\text{CH}_3$ , isohexane,  $\text{CH}_3\text{CH}_2\text{CH}_2\begin{matrix} \text{CH}_3 \\ \text{CH}_3 \end{matrix}$ ", page 5; "cinnamic acid,  $\text{C}_6\text{H}_5\text{Cl}_2\begin{matrix} \text{COOH} \\ \text{COOH} \end{matrix}$ , phenylacrylic acid,  $\text{C}_6\text{Cl}_4\begin{matrix} \text{COOH} \\ \text{COOH} \end{matrix}$ ", page

12, and others. "Palmatic" acid, pages 76 and 54, seems to have displaced palmitic.

C. W. PARMELEE.

GLUE AND GLUE TESTING. BY SAMUEL RIDEAL, D.Sc. London: Scott, Greenwood & Co.; New York: D. Van Nostrand Co. 1900. viii + 144 pp. Price, \$4.00

The author aims to give the more important facts connected with the manufacture of glue. In Chapter I the constitution and properties of glue and allied substances are dealt with. This is a topic which most books on this subject do not go into to any great extent. The relations between glue and gelatine are discussed pretty thoroughly, and a table of gelatine-producing substances is copied from Allen. The next chapter considers the manufacture of glue from the raw materials. Starting with the stock it is carried through the liming, washing, cooking, and clarifying process. The need of careful liming and a good supply of water for washing purposes are both emphasized. The use of antiseptics for prevention of putrefaction is mentioned briefly. A few different kinds of kettles, boilers, and evaporators are described and illustrated. Chapter III, in a few pages, states the various ways in which glue is used and the qualities necessary for the different grades. The next thirty pages have to do with gelatine, giving its properties, tests, etc., and describing different forms and the various uses to which they are put.

The chapter on glue testing is somewhat of a disappointment. The title of the book leads one to expect considerably more than is contained in the twenty odd pages given to it. The final pages on "commercial aspects" review the glue trade in general and deprecate the "antiquated policy of exclusiveness," claiming that the custom of keeping "trade secrets" entirely in the dark retards improvement, and works to the disadvantage of the business.

The book on the whole, while covering the ground pretty thoroughly, contains very few original ideas. Liberal quotations are made from similar works.

W. B. BROWN.

SELECT METHODS IN FOOD ANALYSIS. BY HENRY LEFFMANN, A.M., M.D., AND WILLIAM BEAM, A.M., M.D. Philadelphia: P. Blakiston's Son & Co. 1901. 383 pp. Price, \$2.50.

This is one of the most concise and up-to-date books on the subject of food analysis out. While it is intended to be adapted to the needs of advanced students of chemistry as well as the