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BOOK REVIEWS

INDUSTRIAL WAXES by H. Bennett, Chemical Publishing Co., Inc., New York, 1963, in two volumes. Volume I, Natural and Synthetic Waxes, 324 pages; Volume II, Compounded Waxes and Technology, 289 pages. Both volumes indexed. Price $12 per volume.

In Volume I, the author surveys the different types of natural and synthetic industrial waxes including their sources, preparation, properties and uses. Part I deals with the naturally occurring mineral, animal and vegetable waxes, while Part II is concerned with synthetic waxes. While the mineral waxes are dealt with in great detail (130 pages), fourteen vegetable waxes get only a 24-page treatment, and the animal waxes are glossed over in only seven pages, with wool wax getting a coverage of five lines. In Volume II, the author describes specialized mixtures of waxes and resins and dwells briefly on the tests and techniques in the use and identification of waxes. Each volume has its own index and a listing of trade names.

Admittedly these books give the reader a brief smattering of what waxes are, where they come from, and some general uses; there is very little material on the chemistry or composition of the waxes. The subject matter is presented primarily as a poorly organized collection of tables and charts, copied in the main from various suppliers' trade literature. Trade names are used liberally throughout and rightly so, but in many instances, they are not identified as to company source or composition. For example, tables 6:12 and 6:13, pages 189–191, Vol. I, list Adols, Unadols, Spermafols, Cosmols and Hydrofols, yet nowhere are these products identified, nor are they listed in the index. Additionally, no identification or listing is made for Cerese Wax, Crown Wax, Benowax, Mycrox Wax, Paraflow, Alpco, Reso Wax, Wax 6-00, Albacer and Ceramid. In many other instances, data are presented out of context. For example, table 7:15, page 207, Vol. I, dealing with polyoxyethylene ethers of fatty alcohols, appears in the chapter on fatty acid esters; a table (not numbered) on the characteristics of fatty acids (page 228, Vol. I) appears in the chapter on hydrogenated oils; and halocarbon waxes are inserted in the chapter on ketones, amines and amides.

The section dealing with the identification of waxes is good, but much more space could have been profitably devoted to the meaning and methodology of such tests as tensile strength, penetration, waterproofness, shrinkage, surface tension, specific heat, melting point, congealing point, aniline point, NPA color, IPT penetration, etc., especially since the author characterizes waxes by these properties in tables appearing throughout the books.

Both volumes are printed on a very poor grade of paper; in many cases, the graphs and diagrams and their accompanying legends are almost illegible, as for example, Fig. 2:1, page 52, Vol. II.

Many omissions, errors and in-

accuracies appear throughout both volumes. For example, the legend for the graph in Fig. 2:1, page 93, Vol. I, describes four solvent/wax mixtures, but only one curve is shown; the abscissae in the graphs in Figs. 1:6 and 1:7, pages 25–26, Vol. II, are labeled "per cent paraffin" instead of "specific gravity;" the peroxide value of Hartolan is listed as 2.5% on page 303 of Vol. I; a reference to the cloud point of Solulan 25 (given as footnote 1 on page 302 of Vol. I) actually refers to iodine value data for hydrogenated lanolin; spermaceti is listed as an animal glyceride on page 164 of Vol. II, the graph in Fig. 1:11, page 29, Vol. II, bears no units or legend on either abscissae or ordinate; and Solulan is listed as a product of the American Lanolin Company instead of the American Cholesterol Products, Inc.

While some of the information in these volumes may be helpful to workers in the polish coatings and insulating material field, the reviewer feels the books are of questionable value to the cosmetic chemist.—CHARLES FOX, Warner-Lambert.

COMMERCIAL METHODS OF ANALYSIS by Foster D. Snell and Frank M. Biffen. Chemical Publishing Company, Inc., New York. Revised edition 1964. 731 pages. Price $12.

Since the first edition of this volume appeared in 1944, many changes have taken place in methods of analysis and the apparatus used. The authors have not tried to incorporate the newer methods such as infrared analysis or gas chromatography but have described the new equipment.

So changes are few. Thus, the intent of the first volume to give simple standard methods to students interested in commercial analysis and smaller manufacturers, without extensive laboratory facilities, has been again accomplished.

Illustrations of apparatus and equipment have in general been brought up to date. However, several of the tables, such as synthetic resins, should have been revised.

The volume remains ambitious in character, as evidenced by 39 chapters covering such topics as: pigments, oil and wax emulsions, solvents and thinners, water analysis, soap and soap products, saponificable fats and oils, waxy substances. These chapters are especially useful for brief descriptions of the more important methods of examination of these materials.

Typography is good, and the use of cross references is excellent. On the whole, it is a volume of value as a quick reference guide and particularly useful as a text for new analysts.—WINTHROP E. LANGE, Massachusetts College of Pharmacy.