

civilian accidents. The terminology employed is technical without being so narrowly so that it cannot be understood by students with a limited background in the medical sciences. Sufficient anatomy and physiology are woven into the text to give a solid basis for the first aid measures employed. Wounds, burns, hemorrhage and shock are discussed in sufficient detail without becoming controversial, a factor which is highly important in the teaching of a subject as practical as first aid.

The chapter on "Gas and Bomb Raids" was written by Major H. C. Lueth and is based upon army information coupled with the experiences of the British. The discussions of aerial bombardment and bomb shock are especially noteworthy. Although the section on war gases is thorough, it suffers from a common fault of discussions of gas attack, *i. e.*, too much attention is given to the identification and treatment of individual gases at the expense of emphasis on the general principles of gas treatment and prevention. To the reviewer, it appears to be more logical to know a few simple, general directions for behavior during a gas attack than to be able to distinguish between Lewisite and mustard gas by their odors.

The collaborators are to be congratulated for the superb quality of the many line drawings which add much of practical value to the treatise.—M. W. GREEN.

Experiments in Organic Chemistry, by E. WERTHEIM.

The Blakiston Company, Philadelphia, Pa., 1942. 221 pp., appendix, 23 x 16 cm. Price, \$1.35.

This manual is designed to accompany the text, "Introductory Organic Chemistry," by the same author and to be used by students interested only in a short course in organic chemistry. The experiments are primarily of the "properties and tests" type. The more difficult preparations, especially those requiring less common apparatus and large quantities of chemicals and also time-consuming experiments, have not been included. It is well suited for classes where chemicals and apparatus are limited. The average time necessary to perform each experiment is given. Directions are fully and clearly given and figures and illustrations of apparatus assemblies and manipulations are exceptionally good. The manual contains 62 numbered experiments, is well indexed, and contains an appendix in which are included a table of the essential atomic weights, directions for emergency treatments, necessary chemicals listed by experiments, and directions for preparing special reagents. Questions are occasionally included in the text of the experiments and lists of questions are also appended. The craftsmanship is excellent for this type of book.—E. B. STARKEY.

Identification of Pure Organic Compounds, by ERNEST HAMLIN HUNTRESS, Ph.D., Assoc. Prof. of Organic Chemistry, Mass. Inst. of Tech., and SAMUEL PARSONS MULLIKEN, Ph.D., Late Prof.

of Organic Chemistry, Mass. Inst. of Tech. John Wiley and Sons, Inc., New York, 1941. 691 pp., 15 x 23 cm. Price, \$7.50.

The scope of this volume is limited to 1364 organic compounds selected from the large group of substances containing carbon and hydrogen or carbon, hydrogen and oxygen. Gases and compounds which do not have a melting point or definite boiling point, or are of a syrupy consistency, are excluded. A comparison of this volume with Mulliken's original "Identification of Pure Organic Compounds" shows the deletion of many compounds of lesser importance and the inclusion of many substances now well known and commercially available which were formerly merely laboratory curiosities.

This edition introduces two new features. An index of chemical type has been placed at the opening of each chapter to facilitate rapid location of chemical compounds. An index containing tables of melting points of compounds and their derivatives arranged in a sequence of increasing temperature is given in Chapter XIII. All of the melting points found in the body of the book are classified and summarized in this chapter.

Compounds are classified by a method based upon chemical rather than physical properties and amply described in the first chapter. Each compound for which data are given has an arbitrary number consisting of a digit representing the order, followed by a colon and an arbitrary four digit number indicating the specific compound. Thus, all compounds of this book have the number "one" for the single digit. The system is analogous to a telephone number in which the single digit corresponds to the exchange and the four digits, the individual line. All compounds in the general index of the book are located by this number system rather than by the customary page reference.

Chapter II describes the common generic tests for the nine genres: (1) aldehydes, (2) carbohydrates, (3) acids, (4) phenolic compounds, (5) esters, (6) anhydrides and lactones, (7) ketones, (8) alcohols, (9) hydrocarbons, ethers, etc. Each genus is separately described in succeeding chapters in such a way that the qualitative identity of an "unknown" is easily established. The pertinent facts regarding each compound listed are: the name or names of the compound, structural formula, empirical formula, Beilstein number, physical properties, general information and properties and reactions, preliminary tests, derivatives, and literature references. All of the reactions cited have actually been carried out by the author, a valuable and almost unique contribution.

The reviewer has had numerous occasions to refer to this volume and can attest its applicability. Any library will be enriched by the possession of this book of general reference. For classroom use, it presents a technique for identifying organic compounds in a systematic manner, teaching the student a methodic approach to qualitative organic

analysis which will be useful to him on many occasions.—EMERSON C. BEELER.

The Chemistry and Manufacture of Cosmetics, by MAISON G. DE NAVARRE. D. Van Nostrand Company, 250 Fourth Avenue, New York, 1941. xix + 745 pp., 180 figs., 15.5 x 23 cm. Price, \$8.00.

This book departs from most of the other texts on cosmetology in that it aims not to be purely a formulary, but rather a unified guide to the principles behind the formulas. These principles are laid down in such a manner that they are of value to both small and large operators, a factor that will appeal to many pharmacists.

The book is divided into 10 parts of 34 chapters. The main parts are: weights and measures; types of equipment for small manufacture and properties of raw materials; a resumé of fundamental principles; preservatives and antioxidants; cosmetic colors; emulsions; formulary of the principal types of cosmetics; physiology of the skin, hair and scalp; regulations and interpretations of the Federal Food, Drug, and Cosmetic Act; and appendix and bibliography.

Although most of the fundamental material is well known to practicing pharmacists and teachers of pharmacy, the author frequently treats the material in a novel way which makes it most illuminating. It is quite apparent that the aim of the author is to be practical at all times but not at the expense of fundamental principles. The discussions and the tabulations of properties of raw materials are also presented in a most helpful manner. The table of physical properties of acceptable

cosmetic colors is of special value, and its use can no doubt be expanded beyond the purely cosmetic one.

Part VII, which deals with type preparations, gives many formulas for the various types of cosmetics such as creams, powders, make-up, etc. But, while the formulas as set up are satisfactory, it is intended that they be used as a guide for further development in order to obtain a distinctive product.

The section on the physiology of the skin, hair and scalp is rather scanty, but in the light of the paucity of information on skin pharmacology at the moment, it is probably well that the author is not too dogmatic. The section on dentifrices is well written, the author having been mindful of the position of the American Dental Association with regard to the limitations of this economically important class of substances.

The portion dealing with the Food, Drug, and Cosmetic Act is written by Attorney Ralph J. Mill. Not only are the salient features of the Law, as it applies to cosmetics, well stated, but the interpretations will no doubt help many through the maze of Federal rulings.

The documentation appears to be fair and the list of patents will no doubt be helpful. Technically, the book is well written and printed on a good quality paper and exhibits careful workmanship throughout. It is gratifying to see that the stimulus for this book arises from pharmaceutical needs and it is to be hoped that other problems peculiar to our field will find such a concrete answer.—E. C. BEELER.
