does warrant a place in the pharmacy library and on the booklists of students. Finally, Zatz's book should be helpful to practitioners and pharmaceutical scientists who wish to review one or more aspects of calculations and drug dosing.

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The National Formulary, Fourteenth Edition. Prepared by the National Formulary Board with the approval of the Board of Trustees, by authority of the American Pharmaceutical Association. Published by the American Pharmaceutical Association, 1974. Distributed by Mack Publishing Co., 20th & Northampton Sts., Easton, PA 18042. lxxix + 1124 pp. 14.5 × 23.5 cm. Price $24.00 (domestic and foreign).

In view of the recent acquisition of the National Formulary by the United States Pharmacopeial Convention, Inc., this latest edition of the National Formulary (NF XIV) proves to be a fitting vehicle, even if not so originally designated, for the National Formulary Board of the American Pharmaceutical Association to conclude its traditional responsibilities in setting forth standards of identity, strength, quality, purity, packaging, storage, and labeling of drugs and related articles. Maintaining the policy established for the two previous editions, the recognition of drug substances provided for the admission of articles only on the basis of their therapeutic value.

Of the total of 1009 articles recognized as therapeutic agents or pharmaceutic aids in NF XIV, 318 are newly admitted. The articles newly admitted to NF XIV are broadly representative of classes of agents valuable in modern therapeutics including antibacterials (cephaloglycin), antihypertensives (pentolinium tartrate), antineoplastics (floxuridine), antipsychotics (thiothixene), diagnostic aids (macroaggregated iodinated I 131 serum albumin), and immunizing agents (inactivated mumps virus vaccine). In addition to the monographs, general test chapters, reagent specifications, and general information chapters comprise one-fifth of this edition.

As a result of the efforts of the USP–NF Joint Panel on Primary Requirements, the NF XIV and USP XIX General Notices and Requirements do not differ from each other in substance or intent with regard to the interpretation and application of the official standards, tests, assays, and other specifications—although major differences are noted in the section pertaining to the information included under *Categories and Doses* (*Categories, Doses, and Dispensing Information* in USP XIX). Substantial changes have been made, however, with respect to the General Notices of both previous compendia volumes.

Several new features differentiate NF XIV from the previous edition, NF XIII. The monographs for articles recognized as therapeutic agents and those for articles recognized as pharmaceutic aids are presented in separate sections. Following the principle promulgated by the USAN Council, the word order for monograph titles of most organic compounds ensures that the pharmacologically active portion appears first; *e.g.*, Butabarbital Sodium instead of Sodium Butabarbital as used in NF XIII. Additionally, the assistance of the USAN Council was sought for the purpose of obtaining specific recommendations for complying with provisions of the Federal Food, Drug, and Cosmetic Act regarding the use of "simple and useful names." As a direct result, several new official names appear in NF XIV, replacing either previously official compendia names or previously established names for the article (in the case of articles newly admitted to NF XIV). The chemical data section has been expanded to include the current Chemical Abstracts indexing name that utilizes the recently revised Chemical Abstracts nomenclature system. The Chemical Abstracts Service (CAS) registry numbers have also been added to this section.

A new monograph format was adopted to provide a distinctive manner for setting aside the informational matter, such as category, dose information, sizes available, description, and solubility, that is of particular interest to pharmacists and other users of the compendium. The official definition follows this informational section; the monograph standards, test procedures, and specifications follow the official definition in the familiar two-column format which has been utilized in recent NF editions. However, those specifications and requirements of primary concern for pharmacy practitioners—those regarding packaging, storage, and labeling—have been removed from the end of the monograph (their placement in NF XIII) and prominently placed immediately below the official definition and preceding the chemical tests and assays.

Specific revisions in the compendial tests and assays include the extension of content uniformity requirements to sterile suspensions in addition to their application to tablets, capsules, and sterile solids; the adoption—with caution—of the concept of system suitability tests in procedures using complex instrumentation, as a means of establishing that the entire analytical system is functioning properly to successfully complete the specified test or assay; and the use of newer analytical techniques, such as nuclear magnetic resonance spectroscopy in the case of amyl nitrite, to ensure drug standardization. Where applicable, a new specification entitled *Reference standards* that describes the pertinent storage and drying conditions (unless otherwise indicated in the monograph) for the reference standard materials used in the monograph procedures has been added.

The inclusion in this edition of new general test chapters for procedures such as high-pressure liquid chromatography, nuclear magnetic resonance spectroscopy, and thermal analysis provides for the application of the most advanced knowledge and sophisticated analytical techniques to compendial requirements. The inclusion of the new general test chapter entitled *Containers—Permeation* realizes the proposed official standard for tightness of drug containers that was announced by the NF Board in January 1974.

The individual sections pertaining to general information, reagent specifications, and index complete this volume.

Purchasers of the bound volume of the NF XIV are entitled to receive the *First Supplement* (a composite first supplement with that for USP XIX) at no additional charge. This supplement was published in April and will become official simultaneously with the main volume (July 1, 1975). And, since the American Pharmaceutical Association has relinquished its responsibility for the National Formulary to the United States Pharmacopeial Convention, Inc., all correspondence relating to supplements, standards specifications, and ordering of NF reference standards should be addressed to the National Formulary, 12601 Twinbrook Parkway, Rockville, MD 20852.

The consolidation of NF and USP, to quote Dr. John V. Bergen from his *Preface* to NF XIV, "carries the enthusiastic endorsement and support of the National Formulary Board, which believes this action to be in the best interest of the official compendia, of the professions of pharmacy and medicine, and—most important—of the public . . . [and provides a] new compendial organization which represents a combined voice, a combined resource, and a combined scientific and professional force in drug standardization."

Staff Review