sections on renal implications and tumor-secreted active amines are especially lucid. The authors cite 1890 references without being overly verbose. The book contains several useful tables of important data such as amine concentrations in blood, urine, and tissues in both normal and pathologic conditions; concentrations of dopamine, norepinephrine, serotonin, and other amines in 41 areas of postmortem brain; and the influence of a variety of amines on the formation and excretion of urine in various animals and man.

This book should prove a useful addition to the library of researchers and clinicians in the fields of autonomic pharmacology and endocrine pathophysiology involving altered secretion or levels of these amines. The discussion is not particularly instructive although it is comprehensive and thorough in reviewing the available literature.

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The National Formulary, Thirteenth Edition. Prepared by the National Formulary Board with the approval of the Board of Trustees, by the authority of the American Pharmaceutical Association. The American Pharmaceutical Association, 1970. Distributed by Mack Publishing Co., Easton, PA 18042. lxxiv + 1012 pp. 14.5 × 23 cm. Price $15.00 (Domestic and Foreign).

The publication of the National Formulary, or any other comparable source for methods or standards, is often viewed as an event in itself, rather than the climax of a long series of procedures. In reality, any book of this nature is the end product of much research, fact finding, study, and evaluation. National Formulary, Thirteenth Edition, represents the results of a five-year revision program carried on by the American Pharmaceutical Association, involving more than 500 persons from the fields of medicine, pharmacy, and chemistry.

Certainly, one of the most important considerations—and the most apparent in the preparation of a new NF edition, is the selection of drugs and dosage forms to be recognized and the preparation of monographs for those chosen. Of the 992 officially recognized articles in NF XIII, 411 are newly admitted. Two hundred twenty-one drugs, recognized in NF XII, have been dropped in going to the new edition.

But a second aspect of the NF, which in certain respects has even more far-reaching consequences, is the application of new techniques and methods and the establishment of new criteria by which to ensure the quality and purity of pharmaceuticals. It is this aspect of the NF revision program which probably reflects to a greater extent the rapid changes and advances in technological capabilities and quality control methodology.

In pursuit of its fundamental purpose—to provide standards and specifications which can be used to evaluate the quality of pharmaceuticals—the NF has fostered the study of factors bearing on drug availability. As a result, NF XIII draws upon and utilizes the many recent developments in drug analysis and methodology in providing new tests, new specifications, and new standards.

Of the 80 General Tests chapters in NF XIII, 16 are new; those carried over from NF XII have been revised and updated to reflect more adequately current needs and capacities.

Among the new General Tests chapters, those on X-ray diffraction and dissolution test are important examples. The first provides a technique enabling the NF Board to specify in these drug substance monographs where polymorphism of the crystal may be a problem affecting bioavailability that the article must conform to a specified X-ray diffraction pattern, while dissolution test specifications provide an objective means of determining dissolution characteristics of a solid dosage form. The inclusion of these chapters and specifications in pertinent individual monographs represents an initial effort by the NF to establish specifications where appropriate both for the active ingredient and the final dosage form, to serve as an index of drug quality from the standpoint of expected biological availability.

The aerosol dosage form is recognized officially for the first time in NF XIII through inclusion of monographs for several therapeutically important aerosol preparations. Among the procedures used to establish standards for aerosol products are leak testing, delivery rate, and pressure testing. NF XIII provides standards and specifications for four aerosol propellants in addition to monographs for six individual aerosol dosage forms.

The rise of consumerism on all levels and the increasing consumer awareness and sophistication concerning drugs—in part due to the drug efficacy study, the hearings on oral contraceptives, the cyclamate controversy, concern over misuse of drugs, and rising medical costs in general—have resulted in increased pressure on the official compendia to keep abreast of trends and developments in the scientific areas. In response to this challenge, the NF revision program is to be put on an even more continuous basis with the first supplement having a scheduled official date of September 1, 1970, coinciding with NF XIII.

In accordance with the objectives of a more continuous revision program, additional NF XIII supplements are planned at regular intervals throughout the revision period.

Staff Review ■