sorption of digoxin from all commercially available compressed tablets and their dissolution *in vitro*. The results also indicate the poor applicability of the USP (8) dissolution test in predicting the bioavailability of this particular brand of commercial digoxin tablets.

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Pauli Ylitalo [x]
Institute of Biomedical Sciences
University of Tampere
Teiskont. 35
SF-33520 Tampere 52, Finland
Gunilla Wilén
Stig Lundell
Research Laboratory of Star Ltd.
Pinnink. 53
SF-33100 Tampere 10, Finland

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[x] To whom inquiries should be directed.

BOOKS

REVIEWS

Proceedings of the USP Conference on Radiation Sterilization, The United States Pharmacopeia, Inc., Rockville, MD 20852, 224 pp. 16 × 22 cm. Price $10.00.

This volume consists of 15 papers devoted to an area of pharmaceutical and biomedical technology in which the United States has lagged behind several European nations, largely because of strict controls on testing of safety and efficacy imposed by federal agencies. Among the subjects considered in detail are instrumentation and experimental conditions employed in radiation sterilization, chemical dosimetry, the effects of ionizing radiations on microorganisms, and the evaluation of microbiological control systems for the determination of the efficacy of radiation sterilization.

Ionizing radiation offers an advantage over heat in the sterilization of thermally degradable materials. However, the high doses and dose rates required to effect sterilization, especially against radio-resistant bacteria, represent a problem because of the susceptibility of many materials to chemical and structural alterations as a result of their interactions with ionizing radiations. The treatment of bacteria-containing samples with UV light prior to high-energy irradiation provides a solution to this problem, at least in some cases, as bacteria preirradiated with UV light appear to require smaller doses of ionizing radiations to produce the same degree of sterilization observed in untreated bacterial samples. The cobalt-60 γ-ray source which, historically, was the first sterilization source employed on a wide scale is still preferred over other isotopic sources because of its high radiation flux, long-term stability, and relatively low cost and is favored over electronuclear sources such as the linear accelerator because of the high cost of the latter. It is suggested by several contributors to the volume that the cobalt-60 source is expected to maintain its preeminence for the forseeable future. It is also suggested that the search for and evaluation of better dosimeters and microbiological standards will be a major area of endeavor for some time to come. The need for improved microbiological controls is particularly acute because much of the testing of the efficacy of radiation sterilization has been carried out with bacteria which are unrepresentatively sensitive to radiation damage.

"Proceedings of the USP Conference on Radiation Sterilization" is a comprehensive, authoritative, and very readable account of a subject which is probably the major industrial application of ionizing radiations. Although it deals primarily with applications to biological test systems and surgical products, it is worthwhile reading for all pharmaceutical and biological scientists.

Reviewed by Stephen G. Schulman
College of Pharmacy
University of Florida
Gainesville, FL 32610

The United States Pharmacopeia, Nineteenth Revision. Prepared and Published by The United States Pharmacopeial Convention, Inc., Distributed by Mack Publishing Co., 20th & Northampton Sts., Easton, PA 18042, 1974. l + 824 pp. 21.5 × 28 cm. Price $25.00.

This latest revision of the *United States Pharmacopeia* (USP XIX) continues its respected tradition by providing legally recognized standards for identity, strength, quality, and purity for nearly 1300 important and well-established drugs and their dosage forms in use in the United States. Additionally, about one-fourth of this volume is devoted to general chapters, reagent specifications, and tables.