

NUCLEAR MEDICINE—BRIEF AND TO THE POINT, Konrad Hennig and Peter Woller, Dresden, Theodor Steinkopf, 1974, 148 pp.

In six chapters this book covers (A) physical and technical principles with sections on basic concepts, decay modes, interaction with matter, detectors, electronic accessories, and principles of activity measurement; (B) radiopharmacology with sections on nuclide production, labeling procedures, quality control, and selection criteria; (C) nuclear medicine methodology with sections on kinetic techniques, retention measurements, dilution techniques, in vitro procedures, and static and sequential scanning; (D) diagnostic nuclear medicine with sections on the thyroid, circulation and heart, lungs, liver, spleen, pancreas, kidneys, placenta, blood, lymph system, bones and joints, and central nervous system; (E) therapy with nuclides with sections on the use of ^{131}I and ^{32}P and intracavitary and endolymphatic procedures; and (F) radiation protection with sections on dosimetry, radiation effects, regulations, and principles of protection of personnel, patients, and the general public. Two tables complement the text. The first lists 23 commonly used nuclides with symbol, half-life, decay mode, E beta maximum, E average, E gamma, and dose constant; the second table lists absorbed doses to critical organs and gonads and the average administered dose for 26 common nuclear medicine procedures.

The language is clear, precise, and easily understood. The contents represent "a concise, comprehensive treatise" (Webster's definition of a compendium) on nuclear medicine. For example, under quality control the authors devote one short paragraph to each of the following subjects: specific activity, activity concentration, radionuclide purity, chemical purity (including the biologic aspects of quality control), radiochemical purity, sterility and freedom from pyrogens, stability in vitro, and additives. The subject is covered completely. Another example of good coverage is the section on labeling procedures, explaining the concepts of chemical synthesis, exchange labeling, substitution labeling, biosynthesis and labeling of colloids, and aggregated albumin particles and red blood cells, citing several examples for each. The illustrations are carefully selected and adequate in quality and number. Scan images are used to complement schematic drawings effectively. Mathematical equations are kept to a minimum.

In their foreword, the authors give a brief account of the origins of nuclear medicine beginning with Georg C. de Hevesy and continuing with the first nuclear reactor put in operation in 1942 (here we would have added "at the University of Chicago"). At least one sentence could have been devoted to the "Atoms for Peace" program because of its

significance for the development of applications for radioisotopes. The authors state that the purpose of the book is to inform the practicing physician of the possibilities of modern nuclear medicine procedures and to convey to medical students and medical technicians the principles of this subspecialty. This, I think, was superbly accomplished by the authors. In my opinion, the book is worth translating into other languages because of its educational and vocational value and because of the skill with which the authors solved the problem of condensation.

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LIQUID SCINTILLATION COUNTING, K. D. Neame and C. A. Homewood, New York, Halsted Press, 1974, 180 pp.

The authors have achieved what they set out to do—to write a short practical introduction to liquid scintillation counting. While not designed to be an exhaustive treatise on the subject, the book does succeed in simplifying the first approach to this often perplexing mode of counting radioactivity. The text systematically covers the operational concept of the spectrometer, the principles of solvents and scintillators, counting efficiency and quenching, corrections for various forms of quenching, and the preparation of samples.

An attractive feature for the beginner is the authors' addition of methodologic procedures to the text. This will facilitate the establishment of internal and external standardization, and sample and standard channels-ratio methods for quenching, among other things. Salient advantages and disadvantages are frequently outlined following these procedures.

There is also a chapter on errors encountered in counting, with a brief discussion of counting statistics. A convenient chart on trouble shooting for counting problems is presented. It provides the means for further identifying problems as well as methods for their correction.

Besides the text on liquid scintillation counting, there are chapters introducing the basic physics of radioactivity and radiation protection. The reader is offered sources for more detailed information in an accompanying bibliography.

The book serves as a readable and concise introduction to the subject.

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