JNMT Bookshelf

RADIOACTIVITY AND ITS MEASUREMENT

W.B. Mann, R.L. Ayes, and S.B. Garfinkel, Pergamon Press, 1980, 282 pp, $12.50 softcover, $26.00 hardcover.

This book is a basic physics text that in eight chapters covers the physics and mathematics of radiation and its detection. The first five chapters are written from a historical point of view and cover the discovery of radiation and its interactions with matter. The last three chapters comprise over half of the book; they cover detectors, electronic instrumentation, and radioactivity measurements, respectively. The book is well written and contains very few editorial errors. The diagrams are done in a very sparse and precise manner, and complement the text handsomely. Each chapter is well referenced; a general reference is included at the end of the book. The authors' style is nonpretentious and readable.

Because this is a physics text the authors use quite a bit of mathematics including some calculus and relativistic mechanics. I feel that this would preclude the book from being of much direct usefulness to the general nuclear medicine technologist yet it would be a good reference book for technologists. I think this book would be most useful to those in the health physics profession. I found the chapter on electronics to be the most interesting and the book had very informative discussions on semiconductors and on scintillation detectors. The last chapter has a long discussion on statistics, which some technologists might find helpful if they have a strong background in mathematics.

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MANAGEMENT OF PERSONS ACCIDENTALLY CONTAMINATED WITH RADIONUCLIDES

NCRP Report No. 65. National Council on Radiation Protection and Measurements, Washington, DC, 1980, 205 pp.

With the ever increasing use of radionuclides in research, medical applications, nuclear power, and industrial processes, there coexists the probability of an increase in the number of human exposures to internally-deposited radionuclides. The NCRP has reviewed the scientific literature and selected information that represents the state of the art in the management of contaminated individuals.

The NCRP has purposely directed its attention and recommendations toward the physician who must assume responsibility for the medical management of these patients. Sections of this report would be quite helpful to such paramedical personnel as ambulance attendants and rescue squads. The report contains information of sufficient value that hospital emergency room personnel would benefit from it as well.

Contained within this report is an extraordinary wealth of information concerning the initial management of these patients, diagnostic techniques to measure radioactive contamination, a conceptual basis for treatment decisions, a resume of experience with several important radionuclides, and therapy procedures and drugs.

Of particular value, since most exposure of this type occurs accidentally and the need for immediate treatment is evident, is the "Quick Reference Information" section printed on yellow paper, which can be rapidly referenced. The first four sections of this part consist of check lists to gather information rapidly in order to focus on early treatment options. The next two sections summarize treatment considerations and provide information on selected radionuclides that can be used to assess the immediate and long-term consequences of an exposure.

The NCRP intends this report to serve only as a guide for those called upon to manage an accident case in its initial stages; it is not intended to substitute for medical management decisions made by primary physicians.

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LIQUID SCINTILLATION COUNTING: RECENT APPLICATIONS AND DEVELOPMENT

Chin-Tzu Peng, Donald L. Harrocks, and Edward L. Alpen, eds., Academic Press, 1980, 409 pp, (Vol. I, Physical Aspects), $27.50.

This is the first volume of a two-part book containing the proceedings of the International Conference on Liquid Scintillation Counting, Recent Applications and Developments, held August 21–24, 1979, at the University of California, San Francisco. It contains 37 of the 77 papers presented at the conference and deals mostly with the physical aspects of liquid scintillation science and technology. Volume II deals with sample preparation and applications. The contents of Volume I are somewhat esoteric for the average nuclear medicine practitioner, most routine in-vitro assays having been adapted to crystal scintillation counting techniques. Topics included are scintillation physics and scintillators, quenching, radioactivity standards, advances in instrumentation, alpha counting, Cerenkov count-

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