design criteria, assessment of efficiency and geometry characteristics, and multiple crystal systems. The chapter on a localizing plastic scintillator whole-body counter is very valuable, as it represents a system that is intermediate between the liquid scintillator counters of high efficiency and good geometry, and the usually heavily collimated NaI (Tl) detectors characterized by relatively poor geometry and efficiency but good spatial resolution. Those faced with the prospects of development of a counting facility will profit from the chapter on design criteria. Although something of economics is mentioned in this chapter, the general problems of cost are not adequately covered by the book. Much of the information on counting efficiency and geometrical considerations is treated rather rigorously and is definitely not for the uninitiated.

The second section of the book deals with the application of whole-body counters for measuring electrolyte metabolism, alkaline earth elements in bone diseases, protein metabolism using ^{131}I-labeled proteins, radioiodine, and the absorption and excretion of ^{60}Co-labeled vitamin B_{12} and ^{59}Fe. Under electrolyte metabolism, particular emphasis is given to the study of obesity and to muscle diseases such as dystrophy. Considerable emphasis is placed on compartmental theory and parameters required to estimate exchangeable pools and accretion rates in the chapter on bone diseases. Advantages of whole-body counting techniques for measuring protein turnover (^{131}I-labeled) in patients with neoplastic diseases, as compared with methods based on serum and urinary excretion measurements, are well presented. Much of this portion of the book is indicative of how information gained by whole-body counting systems can supplement information obtained by more conventional methods. There is little question that this technique is a valuable adjunct to other tools available to the clinician. In some instances, it provides a rather unique tool; for example, blood levels of Na^+ and K^+ are not always reliable indicators of entire body pools. In such cases, whole-body counting provides a facile means of determining exchangeable body pool sizes rapidly and accurately.

In summary, this book suffers little from the discontinuity in presentation and style often encountered in works by multiple authors. It is a specialized treatment of the subject and contains a wealth of information for those concerned with either the physical or biological aspects of whole-body counting.

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A CURSORY SURVEY

Title Legal Considerations of Ionizing Radiation

Author Gerald L. Hutton

Publisher Charles C. Thomas

Pages vii + 93

Price $5.50

Reviewer N. P. Rathvon, Jr.

Even in the atomic age, legal principles display their common-law ancestry. Negligence remains negligence though the x ray be substituted for the scalpel. Too many legal writers fail to recognize that a discussion of radiation injury cases may contribute nothing to legal knowledge.

In the main, Mr. Hutton avoids this mistake by limiting his citations to a few well-chosen illustrative cases. The early chapters of *Legal Considerations on Ionizing Radiation* constitute a commendably simple introduction to radionuclides, their uses and dangers. The chapter "Proof of Actionable Radiation Injury," clearly the most valuable in the book, contains many useful warnings of some of the weaknesses, exploitable by litigants, in personnel monitoring systems.

However, the book is too cursory a survey to be of great value. There are important omissions, such as a discussion of "informed consent," and of Section 170 d (Price-Anderson) of the Atomic Energy Act, which is of paramount importance to manufacturers of reactor components and supplies. The distinction between recoveries at law and those under Workmen's Compensation Statutes is not clearly drawn. In the latter, negligence is not an issue, and in a growing number of jurisdictions the Statutes of Limitation have ceased to be a problem (eg: Sec. 28 N.Y.W.C.L.).

Although willing to accept its various responsibilities to its employees, its customers, and third parties, management still needs counsel in establishing procedures and maintaining records that form a legally sound defense against unfounded claims. It is disappointing that Mr. Hutton did not make more of his valuable experience available by discussion of such topics as pre-assignment training, site measurements, documenting enforcement of safety rules, and retention of records.

The book can be warmly recommended for plaintiffs' attorneys with no prior experience in radiation cases, but technical and administrative personnel and their counsel can find more valuable additions to their libraries.

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