BOOK REVIEW

RADIONUCLIDE TRACERS
Their Detection and Measurement

by M F L'ANNUNZIATA
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This book of 8 chapters is an extremely useful and up-to-date review of radioactivity measurement and detection. It contains a large amount of information covering both the theoretical and practical aspects of the quantification and localisation of radionuclides and, at the same time remains eminently readable.

The first two chapters on "Ionizing Radiation and its Interaction with Matter" and "Nuclear Decay Rates" provide an excellent introduction to the forms of radiation emanating from radionuclides used in applied scientific research.

Chapters 3 to 7 discuss the various detectors used for measuring radioactivity and cover gas and liquid ionisation counting, Cherenkov counting and solid scintillation counting. These chapters contain some information which may be more of interest to physicists rather than the average user of radionuclides, but it is very readable and contains very valuable background information. This theoretical information is interspersed with very useful practical information on counting techniques.

The final chapter covers "Radionuclide Imaging" and describes a wide range of autoradiographic methods as well as a short account of medical radionuclide imaging. The practical information contained in this chapter, and especially the tips and hints covering experimental protocols, makes this section an extremely useful review for the life science researcher.

A table in the Appendices lists the elements and their isotopes available as tracers together with their half-life, type of decay, radiation characteristics and decay product. Other important topics covered in the Appendices include statistical methods and criteria in measurement and radionuclide handling and safety procedures.

In general, the book is very readable and well presented with a good use

of photographs, diagrams, tables and charts. Readers requiring more detailed information in specific areas are aided by large and up-to-date reference sections and bibliographies. As well as being a good general guide the book is also extremely valuable for quick reference with useful contents sections at the beginning of each chapter and a comprehensive subject index at the back.

The information presented in the book is well recommended to users of radionuclides, and especially to newcomers to the field. The book provides an excellent state-of-the-art reference work which will cover a wide range of research fields.

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