LABELLED COMPOUNDS AND RADIOPHARMACEUTICALS APPLIED IN NUCLEAR MEDICINE

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This text is a comprehensive discussion of the application of isotopes in life sciences, with special emphasis on the in vivo medical explorations. The book consists of four parts which are subdivided into altogether 27 chapters.

The first six chapters deal with the physical and chemical aspects of stable and radioisotopes, involving the constitution and properties of the nucleus, the production, separation and purification methods of isotopes, the preparation and quality control of isotopically labelled compounds as well as radiation detection, protection and dosimetry.

Radiopharmaceuticals used for diagnostic purposes is the theme of the second part. After a general introduction, one chapter is devoted to the oncological diagnosis and eight chapters deal with radiopharmaceuticals used for in vivo medical exploration of various organs.

The third part, comprising five chapters, under the heading "in vitro methods of analysis with labelled compounds" covers the theory and practice of radioimmunoassay and related methods.

Applications of radioimmunoassay to human medicine are reviewed in the last six chapters.

The book has been written in a clear style and gives the brief and exact definition of all the terms used, which is very important, for this interdisciplinary work may be of interest to chemists, biologists, pharmacologists and physicians alike. The text is well illustrated with chemical formulae, figures and schemes; data are tabulated for the sake of perspicuity. Each chapter has a fairly long list of references, their number altogether is near to 3000, and the work is completed with a short subject index.

The publication of this work is highly opportune, for the latest development in the production of isotopes and labelled compounds as well as in the measurement and evaluation of radioactivity tremendously improved the diagnostic potency of radiopharmaceuticals. It is regrettable that some of the most up-to-date diagnostic methods, e.g. positron emission tomography and nuclear magnetic resonance tomography have been only shortly mentioned.

Overall, however, this volume makes a highly significant contribution to achieving greater recognition of the importance of this special aspects of radioactivity and isotope technique, helps to bridge the gap between chemists and physicians and provides an up-to-date source book of this meaningful field of isotope application.

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