This informative reference covers nuclear medicine instruments from simple radiation detectors to complex positron emission tomography (PET) scanners, focusing on the operation of the most commonly used instruments and issues that arise in their use.

Designed to enable students to perform high-quality imaging, the book emphasizes quality control, explaining how instruments can fail and how to improve the images obtained. The text includes more than 400 photographs, tables and illustrations, as well as sample calculations.

New to the second edition:
- Reflects the latest developments in nuclear medicine with supporting data
- A new chapter on magnetic resonance imaging and its application in nuclear medicine
- A new appendix on laboratory accreditation
- Inclusion of new imaging instruments
- Extensive revisions and new illustrations to enhance understanding of instruments and their application
- Provides a comprehensive overview of major nuclear medicine instruments
- Explains how to use instruments to produce high-quality images
- Emphasizes quality control and ways to improve images
- Features sample calculations and definitions of useful terms
- Contains tables on troubleshooting small instruments and improving planar and SPECT images
- Includes appendices with helpful information about nuclear medicine