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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 20013.4-2010

**Nuclear medicine instrumentation -- Routine tests -- Part 4:
Radionuclide calibrator**

核医学仪器 例行试验 第4部分：放射性核素校准仪

(English Translation)

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Foreword

GB/T .20013 "nuclear medicine instrument routine test" is divided into four parts.

- Part 1. Radiation counting system;

Part 2. Scintillating cameras and single photon emission computed tomography devices;

- Part 3. positron emission tomography;

Part 4. Radionuclide Calibrator.

This part is part 4 of GB/T .20013.

This part is equivalent to the use of IEC/T R61948-4..2006 "Nuclear medicine instrument routine test Part 4. Radionuclide Calibrator" (English version).

For ease of use, this section makes the following editorial changes.

- the preamble and introduction to the deletion of international standards;

- the origin of each term is removed in Chapter 3;

- In Chapter 2, "normative reference documents", according to the requirements of GB/T 1.1 increased the guide;

- For other international standards cited in the standard, if this has been converted to our standard, this part replaces the corresponding international with the national standard number Standard;

--- the abolition of the international standard "term index";

--- with decimal point "." Instead of decimal point ",",

This part is made by the State Food and Drug Administration.

This part is headed by the National Standardization Technical Committee for Medical Electrical Appliances (SAC/TC10).

This part of the drafting unit. Beijing Medical Device Testing Institute.

1 Scope and purpose

This part of GB/T .20013 includes routine testing of radionuclide calibrators used in nuclear medicine. The device uses well type ionization (Directly connected to an appropriate electronic circuit (IEC 61145)) and read directly in units of activity. IEC 61303 and IEC 61145 describes the requirements and specifications for determining performance parameters. These methods are primarily designed for acceptance testing.

2 Normative reference documents

The terms of this document are the terms of this part through the reference in this part of ISO/Any reference to the date of the text , All subsequent amendments (excluding corrigenda) or revisions do not apply to this part, however, encouragement under this section the parties to the agreement study whether the latest version of these documents can be used. For undated references, the latest edition of this document applies section.

GB/T 17857-1999 Medical radiology terminology (Radiation therapy, nuclear medicine and radiation dosimetry equipment) (eqvIEC 60788.

1984)

GB/T .20013.1-2005 Routine test for nuclear medicine instruments - Part 1. Radiation counting system (IEC 61948-1.:2001, IDT) IEC 61145.:1992 Calibration and use of ionization chamber systems for the measurement of radionuclides IEC 61303.:1994 Medical electrical equipment - Radioactive nuclide calibrators - Specific methods for describing performance

3 Terms and definitions

GB/T 17857-1999, IEC 61303.:1994 and IEC 61145.:1992 and the following terms and definitions apply to this part of GB/T .20013.

Acceptance test as required by the user or user representative, by determining the appropriate performance parameters to determine the instrument to meet the seller's statement Technical parameters of the test.

Note: Acceptance tests should be carried out at the appropriate time after installation and after completion of major services. During the acceptance test or the acceptance test has just been completed, Test data are compared with subsequent routine test data.

Routine test the test of the device or its parts at a specified time interval is repeated to determine and record the document relative to the reference data the change of the initial state.

Note: Routine tests can be done by the user using simple methods and equipment.

Ionization chamber test source A radioactive source used to determine the long - term stability of an ionization chamber. The half-life of the source should be greater than 5a, except for the major radionuclides, other radioactive the effect of nuclide content should be as small as possible, that is, within 5a, the indication given by the test device is the same as the primary radionuclide half-life correction Between the deviation of not more than 0.5%.

Note: The ionization chamber test source is used to test the function of the radionuclide calibrator under specified conditions.