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

GB/T 18988.3-2013

Replacing GB/T 18988.3-2003

**Radionuclide imaging device -- Characteristics and test
conditions -- Part 3: Gamma camera based-whole body imaging
systems**

放射性核素成像设备 性能和试验规则 第3部分：伽玛照相机全身成像系统

(English Translation)

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Foreword

GB/T 18988 "Radionuclide imaging device - Characteristics and test" is divided into three parts.

- Part 1. Positron emission tomography apparatus;
- Part 2. Single photon emission computed tomography apparatus;
- Part 3. Gamma camera body imaging system.

This section GB/T 18988 Part 3.

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 18988.3-2003 "Part 3 Radionuclide imaging device - Characteristics and test. Gamma camera Machine body imaging system, "compared with the GB/T 18983.3-2003, the main technical changes are as follows.

- Increase the informative appendix C, appendix uses a NEMA Standards Publication NU1-2007 "Gamma Camera Performance Test" Chapter 5 of the first content;
- Increased introduction.

This section uses redrafted law revision using IEC 61675-3:1998 "Radionuclide imaging device - Characteristics and test rule Part 3. Gamma camera imaging system of the body, "according to the standard rules of the preparation of this section do the following editorial changes. an increase of capital Material Appendix B.

This section remains GB/T 18988.3-2003 modify using IEC 61675-3:1998; this portion of the IEC 61675-3:1998's Reg number control See Appendix A; this section with IEC 61675-2:1998 technical differences between their causes, see Appendix B.

Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of

these patents.

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

This part of the National Standardization Technical Committee on Medical Electrical radiotherapy, nuclear medicine and radiation dosimetry equipment Standardization Technical Committee Will (SAC/TC10/SC3) centralized.

This section is drafted. Beijing Medical Device Testing, Beijing Hamamatsu Photonics Co., Ltd., Siemens (China) Co., Ltd., Tong Electrical (China) Co., Ltd.

Introduction

GB/T 18988.3-2003 modify using IEC 61675-3:1998. Currently, the major manufacturers of raw radionuclide imaging apparatus Production sites are located in the United States, the parameters of its report, the data processing software, test phantoms are standard NEMA National Electrical Manufacturers Association as the design basis, but also manufacturers use IEC standard. In order to facilitate the government, enterprises and medical institutions understand and use of such products IEC and NEMA content of two series of standards, the changes made in the NEMA Standards Publication NU1-2007 "gamma camera performance measurement Again. "Chapter 5 are introduced in this section, as an information appendix C.

Since the IEC and NEMA standards there are some differences in testing requirements, test methods, the use of motifs, test conditions, test Position, the calculation method is different, so I can not compare with each other between the two standard test items and complete references recommend two standard user the method of any one species, not cross-use.

Radionuclide imaging devices - Characteristics and test Part 3. Gamma camera body imaging system

1 Scope

GB/T 18988 provisions of this section concerning the definition of the gamma camera body imaging system, test methods and random files.

This section applies to whole-body imaging systems Anger type gamma camera, the device includes all medical gamma camera, and includes full Body scanning system.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 18988.2-2013 Radionuclide imaging device - Characteristics and test - Part 2. Single photon emission computer off Layer devices (IEC 61675-2:1998, MOD) GB/T 18989-2013 Radionuclide imaging device - Characteristics and test gamma camera (IEC 60789:1992, MOD)

3 Terms and Definitions

GB/T 18988.2-2013, GB/T 18989-2013 define the following terms and definitions apply to this document.

Gamma camera body imaging system gammacamerabasedwholebodyimagingssystem One kind of image forming apparatus flashes, one or two probes, the probe and the object relative to one another and the image information of the radioactive Forming an image.

Scanning stability scanningconstancy Consistency during scanning of the scanning speed, represented by the count per unit length along the entire scan length variation.

Test Method 4

4.1 Common requirements

- a) All measurements are applied GB/T 18989-2013 Table 1 prescribed pulse amplitude analyzer window, other window settings (for example, as specified by the manufacturer of the window) can be used for other additional measurements;
 - b) If there are no other provisions, the measured count rate should not exceed $2 \times 10^4 \text{ s}^{-1}$;
 - c) before the measurement steps for debugging system manufacturers conventionally used should be used, and should not make special debugging to measure specific parameters;
- Performance measurement d) the system must be carried out in a flat mode of operation, the performance of other systems should be GB/T 18989-2013 regulation Given the measured too.