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

GB/T 13694-2008

Replacing GB/T 13694-1992

**General Specifications for alpha, beta and gamma Planar
standard sources**

α 、 β 和 γ 平面标准源通用技术条件

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Quarantine of the People's Republic of China;
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Foreword

This standard replaces GB/T 13694-1992 "alpha-, beta- flat standard sources general technical conditions." This standard and GB/T 13694-1992 We have compared the main following changes.

- a) the standard name to "alpha, beta and gamma standard source plane general technical conditions";
- b) an increase of 8 terms and definitions, change two terms and definitions;
- c) increase the standard source of new varieties of seven (^{55}Fe , ^{238}Pu , ^{129}I , ^{241}Am , ^{57}Co , ^{137}Cs , ^{60}Co gamma standard source);
- d) increasing the scope of sources;
- e) increase the structure of the standard source, nuclear purity testing methods, the source efficiency and source backing material;
- f) increased gamma standard source of radionuclides and filter sheet requirements recommended;
- g) modify the standard source surface emissivity of the recommended range;
- h) increasing the activity of the standard sources of uncertainty plane;
- i) increase the standard source of active surface size and source underlay plane dimensions;
- j) increase the safety and robustness of the standard source;
- k) increase the standard source specification. The standard proposed by China National Nuclear Corporation. This standard by the National Standardization Technical Committee of nuclear energy. This standard was drafted. China Institute of Atomic Energy Research Institute of Isotopes. The main drafters of this standard. Lin Hui, Zhao Jing, Du Junying, Ni Jing wide. This standard replaces the previous standard version of the case. GB/T 13694-1992. alpha, beta and gamma standard source plane general technical conditions

1 Scope

GB/T 13694-2008 is the Chinese national standard on general specifications for alpha, beta and gamma planar standard sources, in the field of energy and heat transfer engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 19 June 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 April 2009. Classification: ICS 27.120.99, CCS F51. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the alpha, beta, gamma standard source plane (hereinafter referred to as "standard source") classification, technical requirements, effective use of packaging, transportation, etc. content. This standard applies to standard source verification plane calibration of surface contamination monitors radioactivity and radiometric calibration of instruments and apparatus.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 7161 Unsealed radioactive substances - Identification and certification

GB 11806 Regulations for the Safe Transport of Radioactive Substances

GB/T 12164 for calibrating dose (rate) meters and for determining their response of beta radiation reference EJ/T 804 radioisotope product code

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Radioactive material is firmly fixed on the source underlay surface particle emission rate and activity by the State or State metrological administrative department of the benchmark test Nuclear eligibility criteria means the plane passing instruments to measure the given sources.

3.2 The number of particles per unit time from a standard source surface or standard source window and emitted a particular type of energy.

3.3 Surface emissivity some standard source of particles per unit time of the endogenous production or release of the same species than the number of particles (expressed as a percentage). Source efficiency standards defined in the formula (1). $\epsilon = \frac{q}{2\pi A} \times 100\%$ (1) Where. ϵ is

--- standard source efficiency (%); Surface emissivity q

--- standard source, the unit is $\text{min}^{-1} \cdot (2\pi \text{sr})^{-1}$; A

--- standard source activity in units of Bq.

3.4 Absorption of the radiation source material for their own emission standard source.