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

**GB/T 12714-2009**

Replacing GB/T 12714-1991

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**Americium-241 Beryllium neutron sources**

镅铍中子源

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### Foreword

This standard replaces GB/T 12714-1991 "americium-beryllium neutron source." Compared with GB/T 12714-1991, mainly in the following changes.

- Change the product code;
- The product specification table appropriate adjustments;
- Increasing the source envelope leakage inspection requirements;
- Increase the safe use of the source term requirements;
- Increased radioactive container work requirements. This standard Annex A, Annex B and Annex C is informative appendix. 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. Drafters of this standard. Wen Zhongming. This standard replaces the previous standard release case. GB/T 12714-1991. Americium-beryllium neutron source

### 1 Scope

GB/T 12714-2009 is the Chinese national standard on americium-241 beryllium neutron 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 13 March 2009 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 November 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 product code, product structure and specifications, technical

requirements, test methods, inspection rules americium beryllium neutron source, identification, inspection Certificates and instructions for use Packaging, transport and storage and so on. This standard applies to americium-beryllium neutron source americium-241 and made of metal beryllium, other (alpha, n) neutron source can refer to the class using the isotope.

## 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 4075-2009 Sealed radioactive sources - General requirements and classification

GB 11806 Regulations for the Safe Transport of Radioactive Substances Leakage test methods

GB 15849 sealed radioactive sources GB Z125 protection standards containing sealed sources instruments

## 3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 When the user presses the neutron source using a conventional purchase activity.

3.2 Press feed production accounting of neutron source activity.

3.3 The number of neutrons from neutron source produced in the body per unit time in n/s.

3.4 Minimum leakage does not occur under normal conditions of use.

3.5 Radioactive americium beryllium neutron source by oxidation of americium and beryllium metal composition having a certain geometry traits substances.

## 4 Product code

Americium-beryllium neutron source code consists of two components. The first part with two letters on behalf of AB americium beryllium neutron source. The second part with four digital, the first one represents the source geometry specifications, after three representatives of the neutron emission rate. As the code represents the envelope AB1206 americium beryllium neutron source is a type of neutron emission rate of  $2 \times 10^6$  n/s.