

ICS 13.280

CCS F84



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

GB/T 11682-2008

Replacing GB/T 11682-1989

Low background alpha and/or beta measuring instruments

低本底 α 和/或 β 测量仪

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Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

This standard replaces GB/T 11682-1989 "Low background alpha meter." This standard and GB/T 11682-1989, compared amended as follows:

- Standard name was changed to "low background alpha and/or beta measuring instrument";
- Increase in the content of measuring low background beta;
- "Normative references" added the standard reference;
- "Terms and Definitions" added "cross-ratio" of the content;
- Increase mutual interference index alpha and beta, that is, cross track than the target;
- Increased requirements and test methods for electromagnetic compatibility of the instrument;
- Increased the instrument software General requirements;
- Remove the "Table 1 instrument rating" Technical indicators background stability;
- Remove the "Table 2 changes affect the amount of projects and requirements" technical requirements change limits and the background count rate. Appendix A of this standard is a normative appendix. The standard proposed by China National Nuclear Corporation. This standard by the National Nuclear Instrument Standardization Technical Committee (SAC/TC30) centralized. This standard was drafted. nuclear (Beijing) Nuclear Instrument Factory. The main drafters of this standard. Yangbin Hua, CCA students, Wubing Lin. This standard replaces the standards previously issued as follows:
- GB/T 11682-1989. Low background alpha and/or beta measuring instrument

1 Scope

GB/T 11682-2008 is the Chinese national standard on low background alpha and/or beta measuring instruments, in the field of environment and health protection, safety. 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 2 July 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 13.280, CCS F84. 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 technical requirements, test methods and inspection rules for low background alpha and/or beta measuring instrument. This standard applies to the measurement of weak alpha, beta radioactivity or instrument surface emissivity, but also for multi-purpose instrument for measuring weak alpha or beta Radioactive portion. This standard does not apply to measuring alpha or beta spectrum types of instruments.

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 4078 radioactivity measurement sample tray, bottles and test tubes of dimensions

GB/T 8993-1998 nuclear instruments - Environmental conditions and testing procedures

GB/T 10257-2001 nuclear instruments and nuclear radiation detectors Quality inspection rule

GB/T 17799.1-1999 Electromagnetic compatibility - Generic standards for residential, commercial and light industrial environment - Immunity

GB/T 19661.1-2005 nuclear equipment and systems - Safety requirements - Part 1. General requirements

GB/T 19661.2 nuclear equipment and systems - Safety requirements - Part 2. radiation protection requirements

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Due to the non-measured physical quantity signal.

3.2 Instrument under normal operating conditions, the sample tray without sources, the instrument indicated value.

3.3 No external radioactive but by the same sample of material, according to the normal procedure of making planar samples tested.

3.4 Instrument under normal operating conditions, the measured value indicating a blank sample.

3.5 Without the presence of the test sample, measuring the inherent count means. These counts from cosmic rays, radioactivity in the environment Substances and radioactive contamination of the detector itself.

3.6 The background count per unit time.