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CCS F87



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

GB/T 10259-2013

Replacing GB/T 10259-1998

Liquid-scintillation counting system

液体闪烁计数器

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Foreword

This standard GB/T 1.1-2009 given rule drafting. This standard replaces GB/T 10259-1998 "liquid scintillation counting system," compared with the GB/T 10259-1998 main technical changes are as follows:

- The standard name be changed to "liquid scintillation counter," Concepts involved amended accordingly;
- Introduction to increase and simplify Chapter 1, a liquid scintillation counter instructions included in the introduction;
- Chapter 2, "Normative references", the latest files and add new files;
- Terms and definitions of "organic solutes flashing" to "flicker substance" (see 3.7);
- Cancel "rated operating conditions" (see the 1998 edition 4.3);
- Modify the table II, III three product 24h instability of the indicator 1 (see 4.3);
- "And affect the amount of the technical characteristics related to" in accordance with GB/T 8993-1998 "Nuclear instruments - Environmental conditions and testing methods" 4.2.2a) and 4.2.6e),
- c) the environmental conditions specified groups, according to Table 1 and Table 3.1 require modification of this standard in Table 3 "Temperature" and "relative humidity" two influence quantity the rated range; the "Additional error" to "affect the amount of error" (see 4.7);
- "Standard test conditions" in accordance with the GB/T 8993-1998 requirements in Table 8 of this revised standard in Table 4, "relative humidity" of Standard test conditions and "environmental radiation" reference conditions (see 5.1.1);
- Increasing the repeatability standard deviation of the method, which was written in Appendix A (informative);
- Increase in radiation safety requirements and test methods for the outer surface of the

instrument (see
4.5.2 and 5.6.2);

1 Scope

GB/T 10259-2013 is the Chinese national standard on liquid-scintillation counting system, in the field of metrology and measurement. 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 11 December 2012 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 July 2013. Classification: ICS 17.240, CCS F87. 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 liquid scintillation counter of technical requirements, test methods, inspection rules and signs, packaging, transportation, storage and accompanying file. This standard applies to liquid scintillation counter (hereinafter referred to as the instrument). This standard does not include having a quenching activity calculation of unknown samples.

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 191-2008 Packaging - Pictorial signs

GB/T 4078-2008 radioactivity measurement sample tray, bottles and test tubes of dimensions

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

GB 9706.1-2007 Medical electrical equipment - Part 1. General requirements for safety

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

GB 11806-2004 safe transport of radioactive materials regulations

GB 18871-2002 ionizing radiation protection and safety of radiation sources basic standards

GB/T 19661.2-2005 nuclear equipment and systems - Safety requirements - Part 2.
radiation protection requirements

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Check the sample radioactivity radioactivitychecksample Departments authorized by the state measurement of radioactive liquid containing specific radionuclide scintillation solution was sealed samples.

3.2 The bottom sample backgroundsample Non-radioactive substances, no quenching liquid scintillation solution was sealed samples.

3.3 Count Road countingchannel On the pulse amplitude analyzer, pulse amplitude range of the predetermined threshold.

3.4 Detection efficiency detectionefficiency Relationship between the measured value and examine the source activity between the instrument's measurement.

3.5 Background count rate backgroundcountingrate When measuring the background sample count rate recorded by instruments.