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

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**The Selection and Use of Reference Materials
(English Translation)**

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Introduction

As reference material traceability and transfer vectors have been a reasonable choice widely used standard material and should with respect to ensure the effectiveness of these activities is important. The main purpose of this specification is to. Promote from the application point the basic concept of standard material, properties, understanding of the role, depending on the purpose to guide the user to choose the right way and use of reference materials, and to establish effective measurement results metrological traceability, achieve comparable measurement results, reliable.

This specification mainly with reference to ISO Guide 33 "certified reference material using the" formulation, also refer to the OIML D18 "Certified reference material measurement national legal metrology services in the field of control applications covering the basic principles of" GB/T 6379 "measurement methods and results of Accuracy (trueness and precision)", EURACHEM/CITAC means Southern "analysis to quantify the measurement uncertainty" and other domestic and foreign documents, and in accordance with China's national conditions, the standard substance is mainly used Way, effective material selection criteria and a variety of applications, general principles to be followed, etc. and provisions set forth in the attached it gives the relevant data recorded in the determination of basic assumptions, presentation and application examples and other aspects of the Evaluation of Uncertainty.

This specification uses statistical methods based on the following assumptions.

- 1) the certified values of certified reference material is a characteristic value of the best estimate of the true value;
- 2) Whether the material (uniformity) was related to the measurement process, they are all random variability, standard substance Laid Valuation results and the use of reference material to carry out measurements of the amount are in line with normal distribution.

Based on the above assumptions, JJF 1059.1 "Evaluation and Expression of Uncertainty in Measurement" Uncertainty spread specified in the Evaluation method applicable to this specification.

This specification is the first release.

Selection and Application of Standards**1 Scope**

This specification defines the standard material, especially those with the main purpose of the certified reference material and through the selection and use of the Principles, guidelines applicable to materials used in legal metrology, measurement and related fields.

This specification also for the preparation of reference materials (production) organization to provide a reference, according to user objects, develop suitable Reference material, improve the ability to provide users with a standard material and technical services.

Note: This specification refers to CRMs National Standard, two standard materials.

2. References

This specification references the following documents.

JJF 1001 common measurement terms and definitions JJF 1005 Standards common terms and definitions JJF 1059.1 Evaluation and Expression of Uncertainty in Measurement JJF 1117.1 chemical measurement comparison GB/T 3358 statistical Vocabulary and symbols (ISO 3534, IDT) GB/T 4091 conventional control charts (ISO 8258, IDT) Analyzing and processing GB/statistical processing and interpretation of normal sample outliers T 4883 data GB/T 6379 Methods of measurement and accuracy (trueness and precision) (ISO 5725, IDT) results GB/T 21415 in vitro diagnostic medical devices - Measurement of quantities in biological samples calibration and control materials assignment Metrological traceability (ISO 17511, IDT) GB/T 28043 using statistical methods (ISO 13528, IDT) than on the ability to inter-laboratory validation OIML D18 certified reference materials in the field of measurement control covering national legal metrology service application group this principle (OIML D18).

The use of Certified Reference Materials in Fields Covered by Metrological Control Exercised by National Services of Legal Metrology - Basic Principles) ISO/IEC Guide 99 international vocabulary of metrology - Basic and general concepts and associated terms (ISO/IEC Guide 99. International Vocabulary of Metrology - Basic and General Concepts and Associated Terms (VIM)) ISO Guide 33 certified reference materials for use (ISO Guide 33. Use of Certified Reference Materials) for dated references, only the dated edition applies to this specification; undated reference documents Member, the latest edition (including any amendments) applies to this specification

3 Terms and definitions

3.1 Control Chart to monitor the process control and reduce process variability, sample statistical measure sequence described in a particular order points drawn