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

GB/T 27043-2025

Replacing GB/T 27043-2012

**Conformity assessment - General requirements for the
competence of proficiency testing providers**

合格评定 能力验证提供者能力的通用要求

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 27043-2012 "General requirements for capability verification for conformity assessment" and is consistent with GB/T 27043-2012.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Added the term "consensus value" (see 3.2);
- b) The terms "coordinator", "robust statistical methods", "subcontractor", "metrological traceability" and "measurement uncertainty" have been deleted (see 2012 edition 3.2, 3.12, 3.14, 3.15, and 3.16 of);
- c) The terms "assigned value" (see 3.1, 2012 edition), "interlaboratory comparison" (see 3.4, 2012 edition), and "off-label" have been changed.

"Group Values" (see 3.5, 3.5 of the 2012 edition), "Participants" (see 3.6, 3.6 of the 2012 edition), "Capability Verification" (see 3.7 and Note, 3.7 and Note of the 2012 edition), "Proficiency testing items" (see 3.8, 3.8 of the 2012 edition), "Proficiency testing providers" (see 3.9, 3.9 of the 2012 edition), "Proficiency testing rounds" (see 3.10, 3.10 of the 2012 edition), "Proficiency testing plan" (see 3.11, 3.11 of the 2012 edition) and "Standard deviation of competence assessment" (see 3.12 and note, 3.13 and note of the 2012

edition);

d) Added the requirements for the effectiveness of proficiency testing (see 5.5, 5.6, 6.1.2, 6.1.3, 6.3.1, 6.3.2, 6.3.3, 6.4.3, 6.4.6, 7.2.1.1, 7.2.1.2, 7.3.4.3, 7.4.1.1, 7.5.3 and 8.5.3);

e) Added requirements for measurement/testing activities and production of proficiency testing items (see 6.1.2 and 6.1.3);

f) Added risk requirements in technical clauses (see 7.2.12, 7.3.2.1 and 7.5.4.1);

g) Added requirements for process monitoring (see 7.5.3).

This document is equivalent to ISO/IEC 17043:2023 "General requirements for the competence of proficiency verification providers for conformity assessment".

Introduction

Proficiency testing (PT) is widely recognized as an important tool to demonstrate the competence of conformity assessment bodies.

This document has been developed to increase confidence in the operations of proficiency testing providers.

The document contains requirements for proficiency testing providers to enable them to demonstrate competence and to be able to effectively assess the performance of participants.

evaluate.

Proficiency testing uses interlaboratory comparisons to evaluate laboratory performance. In this document, the term "interlaboratory comparisons" (see 3.4) extends the terms "laboratory" and "measurement/testing" are used to include all types of conformity assessment bodies and their activities, such as measurement, Testing, calibration, inspection, testing or sampling. The term "method" as used in this document is synonymous with the term "measurement procedure" as defined in ISO/IEC Guide 99.

Synonymous.

There are many different purposes for inter-laboratory comparisons (which can be achieved through proficiency testing schemes), including but not limited to.

a) evaluating the performance of a laboratory in carrying out a specific measurement, test, calibration, inspection, testing or sampling;

b) Identify laboratory problems that may be related to measurement/test methods, effectiveness of personnel training and supervision, equipment calibration, Related factors such as;

c) Establish the validity of measurement/testing methods and the comparability of

measurement/testing results;

- d) Further enhance users' confidence in measurement/test results;
- e) identifying discrepancies in measurement/test results;
- f) Help participating laboratories improve their knowledge based on the comparison results;
- g) confirm the stated measurement uncertainty;

The term "proficiency testing" is not usually used for the following types of inter-laboratory comparisons, as the laboratory's competence must be confirmed in advance to ensure Validity of measurements/tests and metrological traceability of assigned values.

- h) evaluating the performance characteristics of a measurement/detection method (often referred to as collaborative testing);
- i) Used for assigning values of standard substances/standard samples;
- j) Support statements of measurement equivalence between metrology institutes at all levels achieved through key and supplementary comparisons.

Note: The "metrology institutions at all levels" here include the International Bureau of Weights and Measures (BIPM) and its related regional metrology organizations (RMOs), as well as metrology institutes at all levels in my country and designated mechanism.

It is important to recognize that inter-laboratory comparisons for purposes h), i) and j) can provide independent evidence of laboratory competence.

The technical planning and operation of these inter-laboratory comparisons are required.

This document also requires proficiency testing providers to plan and implement measures to address risks and opportunities based on their experience. Addressing risks and opportunities it lays the foundation for improving the effectiveness of the management system, achieving improvements and preventing negative events.

Address risks and opportunities.

Maintaining confidence in the performance of a laboratory is crucial not only for the laboratory and its clients, but also for other stakeholders such as the legal it is also important to identify regulatory bodies, accreditation bodies, and other organizations that have specific requirements for laboratories. Most of the requirements in this document apply to Many areas of ongoing development, particularly in management, planning and design, personnel, ensuring the validity of results and performance evaluations, confidentiality and other aspects Surface (when appropriate).

This document is intended to provide a stable and reliable basis for all stakeholders to determine the competence of proficiency testing providers.

The chapters of this document are consistent with GB/T 27025, including general