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Stationary source emissions - Requirements on proficiency testing schemes for emission measurements

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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Stationary source emissions - Requirements on proficiency testing schemes for emission measurements

Émissions de sources fixes - Exigences relatives aux programmes d'essais d'aptitude destinés aux mesurages des émissions

Emissionen aus stationären Quellen - Anforderungen an Eignungsprüfungsprogramme für Emissionsmessungen

This European Standard was approved by CEN on 12 September 2022.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EN 17656:2022 (E)

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European foreword

This document (EN 17656:2022) has been prepared by Technical Committee CEN/TC 264 "Air quality", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

Proficiency testing based on interlaboratory comparisons are widely used for a number of purposes and their use is increasing internationally. Typical purposes for proficiency testing can include:

- evaluation of the performance of laboratories for specific tests or measurements and monitoring laboratories' continuing performance;
- identification of problems in laboratories and initiation of actions for improvement which, for example, may be related to inadequate test or measurement procedures, effectiveness of staff training and supervision, or calibration of equipment;
- establishment of the effectiveness and comparability of test or measurement methods;
- provision of additional confidence to laboratory customers;
- identification of interlaboratory differences;
- education of participating laboratories based on the outcomes of such comparisons;
- validation of uncertainty claims.

The need for ongoing confidence in laboratory performance is not only essential for laboratories and their customers but also for other interested parties, such as regulators, laboratory accreditation bodies and other organizations that specify requirements for laboratories. EN ISO/IEC 17011 requires accreditation bodies to take account of laboratories' participation and performance in proficiency testing. The European Accreditation Organization (EA) recommends including such activities and their results more strongly in the demonstration of competence.

EN ISO/IEC 17043 specifies general requirements on the competence of proficiency testing providers. Their competence covers the design, the performance and the evaluation of proficiency tests. EN ISO/IEC 17043 explicitly states that this document can be used as a basis for the specification of specific technical requirements in specific fields of application.

This document is based on EN ISO/IEC 17043 and is designed such that it can be generally applied in combination with the most current version of EN ISO/IEC 17043. The structure of this document is aligned with the general structure of standards elaborated by ISO/CASCO.

NOTE ISO/CASCO has specified the following "Terms of Reference" for the revision of ISO/IEC 17043:2010: *Revise ISO/IEC 17043:2010 to insert new CASCO common elements and to make editorial changes to informational Annex B. Possibly make minor editorial clarifications in technical requirements to clarify PT for inspection and sampling. Align with other CASCO standards (e.g., ISO/IEC 17025 and ISO 17034 and related standards, e.g. ISO 13528 and ISO Guide 35). Help solve an outdated structure and requirements for management system, also confusion in symbols for statistical calculations. Bring harmony in structure and management system requirements for users who also operate testing and calibration laboratories and/or production of reference materials. Finally, bring consistency in requirements for 3rd party accreditation bodies.*

This document supplements EN ISO/IEC 17043 by providing clarification and additional information for proficiency testing schemes in the field of emission measurements. However, it will not re-state all the provisions of EN ISO/IEC 17043 and users are reminded of the need to comply with all the relevant criteria detailed in EN ISO/IEC 17043.

1 Scope

This document supplements the requirements of EN ISO/IEC 17043 by providing clarification and additional information for proficiency testing schemes for emission measurements. It gives specific requirements for:

- competence of proficiency testing providers;
- proficiency testing facility characteristics; and
- design, operation and evaluation of proficiency testing schemes by means of interlaboratory comparisons.

All these aspects are necessary in order to organize and conduct proficiency testing on emission measurements.

Requirements on the competence of proficiency testing providers cover personnel, organisation, equipment and environment.

Requirements on the proficiency testing facility characteristics cover measurement sections, measurements ports and working area for the participants.

Requirements on the proficiency testing schemes cover:

- design, including planning, preparations, homogeneity and stability of test atmospheres and statistical design;
- operation, including handling and instruction of participants;
- calculation and use of assigned values; and
- testing results evaluation, including statistical data.

This document supports the application of proficiency testing schemes for checking the performance of testing laboratories in the context of qualification, accreditation and related quality checks in relation to the application of standardized measurement methods such as standard reference methods (SRM) or alternative methods (AM).

This document is applicable in combination with EN ISO/IEC 17043 only.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15259, *Air quality - Measurement of stationary source emissions - Requirements for measurement sections and sites and for the measurement objective, plan and report*

EN ISO 17034, *General requirements for the competence of reference material producers (ISO 17034)*

EN ISO/IEC 17043, *Conformity assessment - General requirements for proficiency testing (ISO/IEC 17043)*

ISO 13528:2022, *Statistical methods for use in proficiency testing by interlaboratory comparison*

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