



ISAB Guidance on Measurements Performed as Part of an Inspection Process

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1. INTRODUCTION

1.1 Status of this document

This document is based upon the ILAC document ILAC-G27:07/2019 Guidance on measurements performed as part of an inspection process. On the transfer of functions to the International Standards & Accreditation Board (ISAB), the text has been reformatted to be an ISAB document without any substantive change to the text.

The document does not intend to - and does not place any new requirements over and above those already stipulated in ISO/IEC 17020:2012. The document only strives to interpret those requirements when used for the purpose of accreditation.

1.2 Background

ISO/IEC 17020 specifies requirements to be fulfilled by inspection bodies in performing inspection. Inspection may include activities referred to as "examinations". Such examinations may include the performance of measurements. ISO/IEC 17025 specifies requirements to be fulfilled by laboratories in performing tests. Testing frequently includes the performance of measurements. Thus, both ISO/IEC 17020 and ISO/IEC 17025 stipulate requirements for the performance of measurements.

This document provides recommendations on how to approach situations where examinations that form part of an inspection assignment include the performance of measurements.

1.3 Terminology



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For the purposes of this document, the terms and definitions given in ISO/IEC 17000:2020, ISO/IEC 17020:2012, ISO/IEC 17025:2017, ISO 15189:2022 and JCGM 200:2012 apply.

1.4 Purpose

This guidance document provides recommendations on how to address cases where measurements are performed as part of inspection. The main objective of producing this document is to assure the validity of measurements performed as part of inspection.

1.5 Scope

This document has been produced with the intention to give guidance to accreditation bodies in the assessment of inspection bodies. However, this document is equally applicable to inspection bodies seeking advice on how to structure and perform its measuring activities.

2. METHODOLOGY

2.1 Sequence of evaluation

When considering what are the appropriate criteria to apply when assessing the performance of an inspection body, it is recommended to follow a structured sequence addressing whether individual elements include measurements, whether measurements should be performed under ISO/IEC 17025 accreditation, and whether individual requirements in ISO/IEC 17025 are relevant to apply.

2.2 Does individual element include measurements (Q1)?

The topic addressed in this document is limited to measurements. If no measurements are included in the inspection there is normally no reason to refer to ISO/IEC 17025.

2.3 Should the measurement be performed under accreditation to ISO/IEC 17025 (Q2)?

Typically, there may be four reasons why a CAB may wish to perform a measurement under accreditation to ISO/IEC 17025:

- The scheme owner/regulator has specified the measurement to be performed under accreditation to ISO/IEC 17025;
- The CAB may wish to use a subcontractor for carrying out the measurement;
- The CAB may wish to be able to offer the service of performing the measurement, under



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accreditation, in other contexts than inspection;

- The CAB may wish to highlight its capability to perform the measurement according to the requirements in ISO/IEC 17025.

2.4 Are individual requirements in ISO/IEC 17025 relevant to apply (Q3)?

A basic principle underlying the formulation of requirements in the 17000 series of standards for CABs is that any user of their services shall find equal confidence in the outcomes produced. In determining whether requirements in ISO/IEC 17025 for metrological traceability, validation of methods, and quality assurance initiatives are relevant to apply, the inspection body must evaluate the criticality of the measurement activity.

3. CASE STUDIES

Typical examples of examinations are described and analyzed in the ISAB framework, including in-service vehicle brake testing, structural component examination, leak testing, pressure testing of valves, magnetic particle inspection, ultrasonic inspection, elevator door kinetic energy testing, pathology tests, and electricity meter current dependency.

4. REFERENCES

- ISO 15189:2022 Medical laboratories - Requirements for Quality and Competence
- ISO/IEC 17000:2020 Conformity assessment - Vocabulary and general principles
- ISO/IEC 17011:2017 Conformity assessment - General requirements for accreditation bodies accrediting conformity assessment bodies
- ISO/IEC 17020:2012 Conformity assessment - Requirements for the operation of various types of bodies performing inspection
- ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
- ISAB-MRA-006 Use of the MRA Mark and Claims of Accreditation Status by Accredited Conformity Assessment Bodies
- ISAB-TECH-1-008(M) Policy for Participation in Proficiency Testing Activities
- ISAB-ACC-002 Policy on Metrological Traceability of Measurement Results
- ISAB-TECH-2-001(M) Application of ISO/IEC 17020:2012 for the Accreditation of Inspection Bodies



5. ANNEXES (SUMMARY)

The document includes detailed annexes covering:

- **Annex A:** Traditional Context of Examination and Testing Activities
- **Annex B1:** Independence requirements across inspection types (Type A, B, C) and laboratories
- **Annex B2:** Metrological Traceability
- **Annex B3:** Validation of Methods
- **Annex B4:** Quality Assurance Initiatives to Ensure Proper Performance of Methods