



## **Guide for the accreditation of sampling in testing laboratories**

### **CLASSIFICATION**

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## Guide for the accreditation of sampling in testing laboratories

1. **Objective:** Provide a guide to laboratories and accreditation bodies, on criteria that should be considered for the accreditation of sampling activities in testing laboratories.
2. **Scope:** This document applies to the accreditation of the sampling performed by testing laboratories.
3. **Introduction:** Sampling is an important part of the conformity assessment process and the conduct of sampling can significantly influence the results of this process. For this reason it has been deemed necessary to establish guidance on the criteria for the consideration in the accreditation of sampling by the accreditation bodies. It is recommended that accreditation bodies take into account the factors documented here; however, some of the criteria defined here are not relevant to all types of sampling.

#### 4. Definitions:

**Sampling:** selection and/or collection of material or data regarding an object of conformity assessment

Note 1 to entry: Selection may be on the basis of a procedure, an automated system, professional judgment, etc.

Note 2 to entry: Selection and collection may be performed by the same or different personnel or organizations.

**Object of conformity assessment:** Entity to which specified requirements (2.2.1) apply

Note 1: Examples are product, process, service, system, installation, project, data, design, material, claim, person, body or organization or any combination thereof.

**Sampling plan:** *A detailed outline of the measurements or samples to be taken. A sampling plan may include such factors as number, location, time and nature of the samples to be taken.*

#### 5. RECOMMENDATIONS:

##### 5.1 When it is advisable to accredit sampling:

- a. For tests used for regulatory compliance or requested by a regulatory authority.
- b. If the standardized test method incorporates it within the procedure.
- c. If requested by the laboratory client.

## **5.2 Description of sampling in the scope of accreditation:**

- a. Sampling is accredited as a part of the test for which accreditation is requested.
- b. In the case of sampling activities isolated from the corresponding accredited test, the Accreditation Body should define its policy for the accreditation of such activities.
- c. The scopes of accreditation should identify:
  - The test for which sampling has been assessed;
  - The sampling method;
  - The item sampled, the types of samples collected; and
  - Type of sites or facilities where samples are collected.

## **5.3 Uncertainty estimation, quality assurance and validation for sampling:**

In practice, there are many possible sources of measurement uncertainty, including non-representative sampling (the sample measured may not represent the defined measurand), so laboratories performing sampling should have mechanisms in place to ensure that the sampling process, transport, sample custody and the time between collection and start of analysis do not invalidate the test results.

## **5.4 Design of the sampling plan:**

Within a sampling process, the definition of the Sampling Plan establishes the level of confidence in the extrapolation between the result obtained from the sample(s) and the actual value in the sampled item.

Therefore, in establishing the Sampling Plan and determining the "confidence level" to be achieved, the following factors should be taken into account:

- Necessary technical competence of the persons carrying out the sampling
- Legal criteria
- Technical criteria
- Economic criteria

Preferably, criteria established in recognized public documents should be used, for example: standards, official methods, regulations, documents prepared by a scheme owner when it exists, methods prepared by the relevant scientific or technical associations, etc.

## **5.5 Aspects to take into account in the sampling evaluation:**

The following aspects may be considered:

- a. Sampling plan;
- b. Sampling collection;
- c. Handling and transport of samples and if applicable the need for a chain of custody;
- d. Identification and traceability of samples;



- e. Relevant requirements affecting traceability or sampling uncertainty;
- f. Criteria for acceptance or rejection of samples;
- g. Sample storage;
- h. Authorizations and qualifications of personnel responsible for sampling;
- i. Test reports and records;
- j. Compliance with regulatory requirements when applicable.
- k. Verify compliance with the requirements of ISO/IEC 17025:2017, numeral 7.8.

**References:**

*ISO/IEC 17025:2017: General requirements for the competence of testing and calibration laboratories*

*ISO/IEC 17000:2020: Conformity assessment - Vocabulary and general principles*