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## Water quality — Sampling —

### Part 25:

## Guideline on the validation of the storage time of water samples

*Qualité de l'eau — Échantillonnage —*

*Partie 25: Lignes directrices pour la validation de la durée de  
conservation des échantillons d'eau*



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CH-1214 Vernier, Geneva  
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Email: [copyright@iso.org](mailto:copyright@iso.org)  
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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 6, *Sampling (general methods)*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

This document addresses the need for harmonized and reliable data on stability, which is essential for the expression of recommendations for both normative and regulatory purposes. It describes a methodological framework that enables laboratories to produce quality data that can be shared and even monetized<sup>[2]</sup>.

It enables laboratories to study the stability of parameters when using the physico-chemical parameters measurement system: organic micropollutants, inorganic and organometallic micropollutants, nutrients and macropollutants in aqueous matrices (surface water, ground water, residual urban and industrial water and drinking water). It covers the sampling, transport and laboratory storage operations.

NOTE This document does not cover solid matrices from aquatic environments (suspended solids, sediments).



# Water quality — Sampling —

## Part 25:

# Guideline on the validation of the storage time of water samples

## 1 Scope

The purpose of this document is to describe test plans and different operating methodologies of these test plans to define and verify the acceptable length of stability of a substance in a sample under specified conditions of preservation (temperature, matrix, light, addition of a stabilizer, where appropriate, type of preservation etc.) before starting analytical protocols (chemicals and physico-chemicals analysis). Biological and microbiological methods are excluded.

It is necessary to have an analytical method with performances that have already been characterized (repeatability, intermediate precision, trueness, accuracy and uncertainty) in order to perform the stability study and implement its test plans.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TS 21231, *Water quality — Characterization of analytical methods — Guidelines for the selection of a representative matrix*

## 3 Terms, definitions and symbols

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### analytical process

detailed description of a measurement according to one or more measurement principles and to one given measurement method, and including any calculations intended to obtain a measurement result

### 3.2

#### batch

<production, material> definite amount of test material prepared by the laboratory at a given point in time under supposedly identical conditions