
Water quality — Sampling —
Part 3:
Preservation and handling of water
samples

Qualité de l'eau — Échantillonnage —

Partie 3: Conservation et manipulation des échantillons d'eau



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Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Sampling and chain of custody	2
5 Reagents and materials	2
6 Containers	5
6.1 Container selection and preparation.....	5
6.2 Filtration on site.....	5
6.3 Filling the container.....	5
7 Sample handling and preservation	5
7.1 Sample handling and preservation for physical and chemical examination.....	5
7.2 Sample handling and preservation for biological examination.....	6
7.3 Sample handling and preservation for radiochemical analysis.....	7
8 Sample transport	7
9 Identification of samples	8
10 Sample reception	8
11 Sample storage	8
Annex A (informative) Techniques for sample preservation	10
Annex B (informative) Container preparation	44
Annex C (informative) Protocol as used in Dutch validation studies	45
Bibliography	47

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).

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).

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

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

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

This fifth edition cancels and replaces the fourth edition (ISO 5667-3:2012), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- updated references in [Table A.1](#);
- clarification in the Introduction concerning use of the preservation times and conditions set out in [Table A.1](#).

A list of all parts in the ISO 5667 series can be found on the ISO website.

Introduction

This document is intended to be used in conjunction with ISO 5667-1, which deals with the design of sampling programmes and sampling techniques.

Where possible this document has been brought into line with current standards. Where new research or validation results have provided new insights, the latest knowledge has been used.

Guidance on validation protocols can be found in ISO 17034.

ISO 5667-3 provides in [Table A.1](#) validated preservation times and/or conditions as well as descriptions of best practice. [Table A.1](#) also refers, for each analyte, to those ISO standards available at the date of publication of this ISO 5667-3. This is however not an exhaustive list. Other methods may be used when they have been validated. However, it is strongly recommended that where a method validation is not available, the preservation times for the analyte as listed in [Table A.1](#) for ISO test methods be followed.

The preservation and storage conditions and maximum storage times per analyte as listed in [Table A.1](#) should be regarded as default conditions to be applied in the absence of any other information.

However, if validation of preservation techniques and holding times has been carried out, relative to specific circumstances and matrices, by a laboratory, then, provided that it can produce evidence of this validation where they differ from those set out in [Table A.1](#) of this standard, these validated preservation and storage conditions and maximum storage times are deemed acceptable for use by the validating laboratories.

Attention is drawn to the proposed development of a new part in the ISO 5667 series, which further elaborates on ISO 5667-3:2018, Annex C, and which will contain guidelines and the elaboration of the required techniques of how to validate new storage times or preservative methods and details of the techniques described.

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Part 3:

Preservation and handling of water samples

NOTICE — This document and the analytical International Standards listed in [Annex A](#) are complementary. Where no analytical International Standard is applicable, the technique(s) described in [Tables A.1](#) to [A.3](#) take(s) normative status.

When new or revised analytical standards are developed with storage times or preservative techniques differing from those in [Tables A.1](#) to [A.3](#), then the storage times or preservative techniques should be validated and presented to ISO/TC 147/SC 6/WG 3 for incorporation into the next revision of this document.

1 Scope

This document specifies general requirements for sampling, preservation, handling, transport and storage of all water samples including those for biological analyses.

It is not applicable to water samples intended for microbiological analyses as specified in ISO 19458, ecotoxicological assays, biological assays and passive sampling as specified in the scope of ISO 5667-23.

This document is particularly appropriate when spot or composite samples cannot be analysed on site and have to be transported to a laboratory for analysis.

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 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 5667 (all parts), *Water quality — Sampling*

ISO 19458, *Water quality — Sampling for microbiological analysis*

3 Terms and definitions

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

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

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

3.1

integrity

property that the parameter(s) of interest, information or content of the sample container has not been altered or lost in an unauthorized manner or subject to loss of representativeness