

Water quality - Performance requirements and conformity test procedures for water monitoring equipment - Automatic sampling devices (samplers) for water and waste water

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16479:2023 sisaldab Euroopa standardi EN 16479:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 16479:2023 consists of the English text of the European standard EN 16479:2023.
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English Version

Water quality - Performance requirements and conformity
test procedures for water monitoring equipment -
Automatic sampling devices (samplers) for water and
waste water

Qualité de l'eau - Exigences de performance et modes
opératoires d'essai de conformité pour les
équipements de surveillance de l'eau - Dispositifs
d'échantillonnage automatiques (échantillonneurs)
pour l'eau et les eaux usées

Wasserbeschaffenheit - Leistungsanforderungen und
Konformitätsprüfungen für Geräte zum
Wassermonitoring - Automatische Probenahmegeräte
für Wasser und Abwasser

This European Standard was approved by CEN on 27 February 2023.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 16479:2023) has been prepared by Technical Committee CEN/TC 230 “Water analysis”, 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of an identical text or by endorsement, at the latest by October 2023, and conflicting national standards shall be withdrawn at the latest by October 2023.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.

This document supersedes EN 16479:2014.

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

This document is a product standard for automatic sampling devices (samplers) for water and waste water. It specifies general requirements, performance requirements, and procedures for the conformity testing of samplers.

The general requirements include functional facilities that samplers need to meet users' applications and information that needs to be included in associated documents. Conformity with these requirements is verified by inspection. The performance requirements define the capability of a sampler to collect samples of water reliably. Conformity with these requirements is determined by testing carried out in a laboratory under controlled conditions. Statistical procedures are defined for evaluation of the conformity test data and some example calculations are provided.

The sample volume over which the test procedures will be applied, the "set sample volume", is not specified. It is for the sampler manufacturer and/or the user to decide on the required set sample volume taking into account varying national commercial markets and regulatory requirements.

These requirements and statistical procedures take into account those specified in ISO 5667-10:2020 [1] for automatic samplers. Samplers that are shown, by means of the tests, to conform to the requirements specified in this document are considered to be fit for purpose. However, this document does not cover the installation and on-going use of samplers.

This document is associated with EN 17075 [2] which covers measuring devices for water and waste water.

Automatic sampling devices are widely used for compliance monitoring purposes under national and European regulations.

The use of an automatic sampling device, for example in a hazardous environment, can also be subject to national, European and international rules and legislation governing the safety of products.

1 Scope

This document specifies general requirements, performance requirements and conformity test procedures for automatic sampling devices (samplers) for water and waste water that:

- sample water and waste water from non-pressurized (i.e. open to atmosphere) channels or vessels;
- sample over extended periods to collect discrete or composite samples based on time, event or flow proportional sampling.

It does not include sampling systems built into online and in-line analysers.

The general requirements include functional facilities that samplers need to meet users' applications and information that needs to be included in associated documents.

The test procedures specify uniform methods to be used when determining key performance characteristics of samplers at one or more set sample volume. It is for the sampler manufacturer and/or user to decide on the required set sample volume(s). All of the test procedures are to be carried out under laboratory conditions. It is recognized that for some samplers, certain test procedures are not applicable.

Statistical procedures are specified for evaluation of the test data. Some example calculations are provided.

Specific sample integrity requirements are specified for samplers to be used for the collection of samples of final effluent or influent for the purpose of monitoring the performance of urban waste water treatment works. Samplers to be used for other industrial applications do not need to be assessed against these specific sample integrity requirements.

This document does not cover the installation and on-going use of samplers.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

automatic sampling device for water and waste water
automatic sampler

equipment for collecting and storing samples of water or waste water for subsequent laboratory analysis

3.2

bias

estimate of a systematic measurement error

Note 1 to entry: The systematic measurement error is a component of measurement error that in replicate measurements remains constant or varies in a predictable manner.

[SOURCE: ISO/IEC Guide 99:2007, 2.18, modified — Note 1 to entry has been added.] [4]