

SLOVENSKI STANDARD

SIST EN ISO 10634:2019

01-maj-2019

Nadomešča:
SIST EN ISO 10634:1999

Kakovost vode - Priprava in obdelava v vodi slabo topnih organskih spojin za nadaljnje vrednotenje njihove biorazgradljivosti v vodi (ISO 10634:2018)

Water quality - Preparation and treatment of poorly water-soluble organic compounds for the subsequent evaluation of their biodegradability in an aqueous medium (ISO 10634:2018)

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Wasserbeschaffenheit - Anleitung für die Vorbereitung und Behandlung von in Wasser schwer löslichen organischen Verbindungen für die nachfolgende Bestimmung ihrer biologischen Abbaubarkeit in einem wässrigen Medium (ISO 10634:2018)

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Qualité de l'eau - Préparation et traitement des composés organiques peu solubles dans l'eau en vue de l'évaluation de leur biodégradabilité en milieu aqueux (ISO 10634:2018)

Ta slovenski standard je istoveten z: EN ISO 10634:2018

ICS:

13.060.70	Preiskava bioloških lastnosti vode	Examination of biological properties of water
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en,fr,de

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EUROPEAN STANDARD

EN ISO 10634

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2018

ICS 13.060.70

Supersedes EN ISO 10634:1995

English Version

**Water quality - Preparation and treatment of poorly
water-soluble organic compounds for the subsequent
evaluation of their biodegradability in an aqueous medium
(ISO 10634: 2018)**

Qualité de l'eau - Préparation et traitement des
composés organiques peu solubles dans l'eau en vue de
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Wasserbeschaffenheit - Anleitung für die Vorbereitung
und Behandlung von in Wasser schwer löslichen
organischen Verbindungen für die nachfolgende
Bestimmung ihrer biologischen Abbaubarkeit in einem
wässrigen Medium (ISO 10634:2018)

This European Standard was approved by CEN on 20 October 2018.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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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 ISO 10634:2018) has been prepared by Technical Committee ISO/TC 147 "Water quality" in collaboration with 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 June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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 ISO 10634:1995.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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The text of ISO 10634:2018 has been approved by CEN as EN ISO 10634:2018 without any modification.

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INTERNATIONAL
STANDARD

ISO
10634

Second edition
2018-10

**Water quality — Preparation and
treatment of poorly water-soluble
organic compounds for the subsequent
evaluation of their biodegradability in
an aqueous medium**

*Qualité de l'eau — Préparation et traitement des composés
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biodegradabilité en milieu aqueux*

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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).

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 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.

This document was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 5, *Biological methods*.

This second edition cancels and replaces the first edition (ISO 10634:1995), which has been technically revised to take into account user feedback, new technologies and available reagents.

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.

Introduction

The standardizing work carried out by ISO/TC 147/SC 5 has shown that the development of a single method for evaluating the biodegradability of organic compounds with a low solubility in water (i.e. < 100 mg/l^{[1][2][3]}) cannot be envisaged in the immediate future. In fact, the selection of the most suitable working method to obtain a satisfactory emulsion or dispersion of these compounds in the test media depends particularly on their physicochemical properties. Consequently, the selection of the most suitable method has to be left to the judgement of laboratories responsible for the tests based on their experience and the product information supplied by the applicant. For this reason, this document describes various techniques for treating poorly water-soluble organic compounds before they are investigated for biodegradability tests. The objective is to reach a stage where, for any given technique, the same working method is used by all laboratories, thus making it easier to compare results. Specificities of the selected protocol should be kept in mind for the evaluation and interpretation of the results of the biodegradation test.

The techniques described in this document will not necessarily produce the same biodegradability results of the test compound if they are used in parallel. The use of solvents and dispersing or emulsifying techniques can be additional sources of uncertainty and can lead to test results which differ from those obtained without using these techniques. Furthermore, dispersions or emulsions can be produced that would not exist as such in nature. It is recommended to perform biodegradability tests with the direct addition of a test compound and using dispersion techniques in parallel because activity of inoculum used should be comparable. The presence of microorganisms with potential to degrade the test compound is assumed to be identical. The composition and activity might change when the tests are conducted subsequently.

According to current standards for testing biodegradability, only pure or compounds containing a low amount of impurities should be tested. Biodegradability tests are not recommended for heterogeneous mixtures or multicomponent compounds as the results of such tests are difficult to interpret, especially when the degradation is partial. Moreover, the use of solvents and dispersion techniques can lead to unrepresentative heterogeneous distributions and to misleading test results in the subsequent biodegradability tests.