



**SLOVENSKI STANDARD
SIST EN ISO 10253:2024**

01-december-2024

**Nadomešča:
SIST EN ISO 10253:2017**

Kakovost vode - Preskus zaviranja rasti morskih alg s *Skeletonema* sp. in *Phaeodactylum tricornutum* (ISO 10253:2024)

Water quality - Marine algal growth inhibition test with *Skeletonema* sp. and *Phaeodactylum tricornutum* (ISO 10253:2024)

Wasserbeschaffenheit - Wachstumshemmtest mit marinen Algen *Skeletonema* sp. und *Phaeodactylum tricornutum* (ISO 10253:2024)

Qualité de l'eau - Essai d'inhibition de la croissance des algues marines avec *Skeletonema* sp. et *Phaeodactylum tricornutum* (ISO 10253:2024)

Ta slovenski standard je istoveten z: EN ISO 10253:2024

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ICS:

13.060.70 Preiskava bioloških lastnosti vode Examination of biological properties of water

SIST EN ISO 10253:2024

en,fr,de

EUROPEAN STANDARD

EN ISO 10253

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2024

ICS 13.060.70

Supersedes EN ISO 10253:2016

English Version

Water quality - Marine algal growth inhibition test with Skeletonema sp. and Phaeodactylum tricornutum (ISO 10253:2024)

Qualité de l'eau - Essai d'inhibition de la croissance des
algues marines avec Skeletonema sp. et Phaeodactylum
tricornutum (ISO 10253:2024)

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marinen Algen Skeletonema sp. und Phaeodactylum
tricornutum (ISO 10253:2024)

This European Standard was approved by CEN on 29 June 2024.

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European foreword

This document (EN ISO 10253:2024) 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of an identical text or by endorsement, at the latest by January 2025, and conflicting national standards shall be withdrawn at the latest by January 2025.

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 10253:2016.

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**International
Standard**

ISO 10253

**Water quality — Marine algal
growth inhibition test with
Skeletonema sp. and *Phaeodactylum
tricornutum***

*Qualité de l'eau — Essai d'inhibition de la croissance des algues
marines avec *Skeletonema* sp. et *Phaeodactylum tricornutum**

**Fourth edition
2024-07**

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Published in Switzerland

ISO 10253:2024(en)

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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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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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*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 230, *Water analysis*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 10253:2016), which has been technically revised.

The main changes are as follows:

- in [Table 2](#), K_3PO_4 has been substituted with K_2HPO_4 in stock solution 3;
- [Annex D](#) has been added to describe the marine algal growth inhibition test with *Phaeodactylum tricornutum* applied in 24-well-microwell plates;
- in [Table A.1](#), dilution step 5 was changed to dilution step 6.

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.

Water quality — Marine algal growth inhibition test with *Skeletonema* sp. and *Phaeodactylum tricornutum*

WARNING — Persons using this document should be familiar with normal laboratory practice. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices.

IMPORTANT — It is absolutely essential that tests conducted according to this document be carried out by suitably qualified staff.

1 Scope

This document specifies a method for the determination of the inhibition of growth of the unicellular marine algae *Skeletonema* sp. and *Phaeodactylum tricornutum* by substances and mixtures contained in sea water or by environmental water samples (effluents, elutriates, etc.).

The method can be used for testing substances that are readily soluble in water and are not significantly degraded or eliminated in any other way from the test medium.

NOTE With modifications, as described in ISO 14442 and ISO 5667-16, the inhibitory effects of poorly soluble organic and inorganic materials, volatile compounds, metal compounds, effluents, marine water samples and elutriates of sediments can be tested.

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 5667-16, *Water quality — Sampling — Part 16: Guidance on biotesting of samples*

ISO 14442, *Water quality — Guidelines for algal growth inhibition tests with poorly soluble materials, volatile compounds, metals and waste water*

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

cell density

number of cells per unit volume of medium

Note 1 to entry: The cell density is expressed as x cells ml⁻¹.