



SLOVENSKI STANDARD
SIST EN 27027:1996

01-oktober-1996

Kakovost vode - Ugotavljanje motnosti (ISO 7027:1990)

Water quality - Determination of turbidity (ISO 7027:1990)

Wasserbeschaffenheit - Bestimmung der Trübung (ISO 7027:1990)

Quantité de l'eau - Détermination de la turbidité (ISO 7027:1990)

Ta slovenski standard je istoveten z: EN 27027:1994

[SIST EN 27027:1996](https://standards.iteh.ai/catalog/standards/sist/86192fd2-970c-4e30-abb1-54262a2d8f88/sist-en-27027-1996)

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ICS:

13.060.60	Preiskava fizikalnih lastnosti vode	Examination of physical properties of water
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en

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EUROPEAN STANDARD

EN 27027

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 1994

UDC 614.777:543.31

Descriptors: Water, quality, water tests, environmental protection, water pollution, determination, turbidity, macroscopic analysis, transparency, optical measurements

English version

**Water quality - Determination of turbidity
(ISO 7027:1990)**

Qualité de l'eau - Détermination de la
turbidité (ISO 7027:1990)

Wasserbeschaffenheit - Bestimmung der Trübung
(ISO 7027:1990)

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This European Standard was approved by CEN on 1994-01-14. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

On the proposal of the CEN Central Secretariat, the Technical Board decided to submit the International Standard:

"Water quality - Determination of turbidity (ISO 7027:1990)"

to the formal vote.

The result of the formal vote was positive.

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 July 1994, and conflicting national standards shall be withdrawn at the latest by July 1994.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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Endorsement notice

[SIST EN 27027:1996](https://standards.iteh.ai/catalog/standards/sist/86192fd2-970c-4e30-abb1-34262a2d0188/sist-en-27027-1990)

The text of the International Standard ISO 7027:1990 was approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

**ISO
7027**

Second edition
1990-04-15

Water quality – Determination of turbidity

Qualité de l'eau – Détermination de la turbidité

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Reference number
ISO 7027 : 1990 (E)

ISO 7027 : 1990 (E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7027 was prepared by Technical Committee ISO/TC 147, *Water quality*.

This second edition cancels and replaces the first edition (ISO 7027:1984), of which it constitutes a minor revision.

Annex A of this International Standard is for information only.

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Case postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Introduction

Turbidity in liquids is caused by the presence of undissolved matter. In the case of undissolved, finely dispersed matter, the turbidity may be determined by measuring the attenuation of a radiant flux as it passes through the liquid or by measuring the intensity of diffused radiation. The diffusion of radiation is a property of liquids and can be used to measure turbidity. This International Standard describes both of these methods, together with methods which, although largely superseded since the development of optical turbidimeters, are still used for semiquantitative determinations, for example to obtain information in field work on surface and waste waters.

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Water quality – Determination of turbidity

Section 1: General

1.1 Scope

This International Standard specifies four methods for the determinations of turbidity of water.

Section 2 specifies semiquantitative methods, employed for example in field work:

- a) method using the transparency testing tube (suitable for pure and lightly polluted water);
- b) method using the transparency testing disk (especially suitable for surface water).

Section 3 specifies quantitative methods using optical turbidimeters:

- a) method by measuring diffused radiation, applicable to water of low turbidity (for example drinking water). Depending on the instrument design, it may also be used for waters of higher turbidity;
- b) method by measuring the attenuation of a radiant flux, more suitable for highly turbid waters (for example waste or polluted waters).

Measurements of turbidity can be affected by the presence of dissolved light-absorbing substances (substances imparting colour). Such effects can be minimized, however, by performing measurements at wavelengths greater than 800 nm. Only a blue colour, which may be found in certain polluted waters, slightly affects measurements of turbidity in this region of the spectrum. Air bubbles may also interfere with measurements but such interference may be minimized by careful handling of the samples.

1.2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International

Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

<https://standards.itech.ai/catalog/standards/sist/861921d2-970c-4e30-abb1-4262a260186/sist-en-27027-1996>

ISO 3864 : 1984, *Safety colours and safety signs*.

ISO 6107-2 : 1989, *Water quality – Vocabulary – Part 2*.

CIE Publication No. 17 : 1987, *International Lighting Vocabulary*.

1.3 Definitions

For the purpose of this International Standard, the definitions given in CIE Publication No. 17, and the following, apply.

turbidity: Reduction of transparency of a liquid caused by the presence of undissolved matter.

See also 3.1.

1.4 Sampling and samples

Maintain all glassware that comes into contact with the sample in a scrupulously clean condition. Wash with hydrochloric acid or surfactant cleaning solution.

Collect samples in glass bottles, fit stoppers, and carry out the determinations as soon as possible after collection. If storage is unavoidable, store the samples in a cool, dark room but not longer than 24 h. If the samples have been stored cool, allow to come to room temperature before measurement. Prevent contact between the sample and air and avoid unnecessary changes in the temperature of the sample.