



SLOVENSKI STANDARD SIST EN ISO 7027:2000

01-december-2000

Nadomešča:
SIST EN 27027:1996

Kakovost vode - Ugotavljanje motnosti (ISO 7027:1999)

Water quality - Determination of turbidity (ISO 7027:1999)

Wasserbeschaffenheit - Bestimmung der Trübung (ISO 7027:1990)

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

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Ta slovenski standard je istoveten z: EN ISO 7027:1999

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ICS:

13.060.60	Preiskava fizikalnih lastnosti vode	Examination of physical properties of water
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SIST EN ISO 7027:2000

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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Supersedes EN 27027:1994

English version

Water quality - Determination of turbidity (ISO 7027:1999)

Qualité de l'eau - Détermination de la turbidité (ISO
7027:1999)

Wasserbeschaffenheit - Bestimmung der Trübung (ISO
7027:1999)

This European Standard was approved by CEN on 12 December 1999.

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.

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 Central Secretariat has the same status as the official versions.

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Foreword

The text of the International Standard ISO 7027:1999 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 supersedes EN ISO 27027:1994

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 2000, and conflicting national standards shall be withdrawn at the latest by June 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE FROM CEN/CS: The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

Endorsement notice

The text of the International Standard ISO 7027:1999 was approved by CEN as a European Standard without any modification.

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INTERNATIONAL
STANDARD

ISO
7027

Third edition
1999-12-15

Water quality — Determination of turbidity

Qualité de l'eau — Détermination de la turbidité

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ISO 7027:1999(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 7027 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical, biochemical methods*.

This third edition cancels and replaces the second edition (ISO 7027:1990), which has been technically revised.

Annex A of this International Standard is for information only.

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Introduction

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 can be found in certain polluted waters, slightly affects measurements of turbidity in this region of the spectrum. Air bubbles can also interfere with measurements, but such interference can be minimized by careful handling of the samples.

It should be investigated whether, and to what extent, particular problems will require the specification of additional marginal conditions.

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Water quality — Determination of turbidity

1 Scope

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

Two semiquantitative methods, employed for example in field work, are specified:

- a) measurement of turbidity using the transparency testing tube (applicable to pure and lightly polluted water);
- b) measurement of turbidity using the transparency testing disk (especially applicable to surface water).

Two quantitative methods, using optical turbidimeters, are specified:

- c) measurement of diffuse radiation, applicable to water of low turbidity (for example drinking water);

Turbidity measured by this method is expressed in formazin nephelometric units (FNU); results typically range between 0 FNU and 40 FNU. Depending on the instrument design, it may also be applicable to waters of higher turbidity.

- d) measurement of the attenuation of a radiant flux, more applicable to highly turbid waters (for example waste or polluted waters).

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Turbidity measured by this method is expressed in formazin attenuation units (FAU); results typically range between 40 FAU and 4000 FAU.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

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

ISO 5667-3:1994, *Water quality — Sampling — Part 3: Guidance on the preservation and handling of samples*.

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

3 Terms and definitions

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

3.1

turbidity

reduction of transparency of a liquid caused by the presence of undissolved matter