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## **Water quality - Determination of turbidity**

Water quality - Determination of turbidity

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 7027:2000 sisaldab Euroopa standardi EN ISO 7027:1999 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 16.06.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 7027:2000 consists of the English text of the European standard EN ISO 7027:1999.</p> <p>This document is endorsed on 16.06.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This International standard specifies four methods for the determination of turbidity of water: method using the transparency testing tube; method using the transparency testing disk; method using diffused radiation and the method using the attenuation of a radiant flux.</p>	<p><b>Scope:</b></p> <p>This International standard specifies four methods for the determination of turbidity of water: method using the transparency testing tube; method using the transparency testing disk; method using diffused radiation and the method using the attenuation of a radiant flux.</p>
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Võtmesõnad:

**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 1999-12-12.

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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

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

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

## Foreword

International Standard

ISO 7027 : 1999 Water quality – Determination of turbidity,

which was prepared by ISO/TC 147 'Water quality' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 230 'Water analysis', the Secretariat of which is held by DIN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by June 2000 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

## Endorsement notice

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

Note: Normative references to international publications are listed in Annex ZA (normative).

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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.

## 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).

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