SLOVENSKI STANDARD
SIST EN ISO 7887:1996

01-junij-1996

Kakovost vode - Preiskovanje in določanje barve (ISO 7887:1994)

Water quality - Examination and determination of colour (ISO 7887:1994)

Wasserbeschaffenheit - Untersuchung und Bestimmung der Färbung (ISO 7887:1994)

Qualité de l'eau - Examen et détermination de la couleur (ISO 7887:1994)

Ta slovenski standard je istoveten z: **EN ISO 7887:1994**

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Water quality - Examination and determination of colour (ISO 7887:1994)

Qaulité de l'eau - Examen et détermination de la couleur (ISO 7887:1994)

Wasserbeschaffenheit - Untersuchung und Bestimmung der Färbung (ISO 7887:1994)

This European Standard was approved by CEN on 1994-10-14. 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.

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CEN

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

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

Foreword

This European Standard has been taken over by the Technical Committee CEN/TC 230 "Water analysis" from the work of ISO/TC 147 "Water quality" of the International Organization for Standardization (ISO).

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of an identical text or by endorsement, at the latest by April 1995, and conflicting national standards shall be withdrawn at the latest by April 1995.

According to 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, United Kingdom.

Endorsement notice

The text of the International Standard ISO 7887:1994 was approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

ISO 7887

Second edition
1994-09-01

Water quality — Examination and determination of colour

Qualité de l'eau — Examen et détermination de la couleur

Reference number
ISO 7887:1994(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 7887 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical, biochemical methods*.

This second edition cancels and replaces the first edition (ISO 7887:1985), which has been technically revised.

Annex A of this International Standard is for information only.

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Introduction

Pure water observed by transmitted light through a depth of several metres exhibits a light blue colour which may be modified in the presence of pollutants to produce an infinite variety of colours. Natural waters are mostly coloured yellowish brown by particular components of iron, clay particles, or by humic matter (or coloured green due to a content of algae) and the observed colour may not be entirely due to completely soluble substances. For analytical purposes, however, it is the "true colour" of a sample which is of interest. The true colour is described as that due to dissolved substances (i.e. all materials that pass a 0,45 µm filter). Colour observed in the presence of undissolved suspended matter is described as "apparent colour". The inherent colour of water can be neglected in analytical practice.

The term colour, in its strict sense, describes the attribute of visual perception consisting of any combination of chromatic and achromatic content (see CIE Publication No. 17.4:1987, term No. 845-02-18). In this International Standard the term colour is used in a looser sense, for describing the absorption at specified wavelengths.

Water quality — Examination and determination of colour

Section 1: General

1.1 Scope

This International Standard specifies three methods for the examination of colour.

Section 2 specifies a method for the examination of apparent colour by visually observing a water sample in a bottle. This gives only preliminary information, for example for use in field work. Only the apparent colour can be reported.

Section 3 specifies a method for the determination of the true colour of a water sample using optical apparatus and is applicable to raw and potable water and to industrial water of low colour. For interferences, see 3.3.

Section 4 specifies a method for the determination of the colour by visual comparison with hexachloroplatinate standard solutions and may be applied to raw and drinking water. For interferences, see 4.2.

Under certain circumstances, strongly coloured water samples need to be diluted before examination or determination.

When stating the result, it is absolutely necessary to refer to the applied method.

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.

ISO 10523:1994, *Water quality — Determination of pH.*

CIE Publication No. 17.4:1987, *International lighting vocabulary.*

1.3 Definitions

For the purposes of this International Standard, the definitions given in CIE Publication No. 17.4, and the following, apply.

1.3.1 colour of water: Optical property that causes the changing of the spectral composition of transmitted visible light.

1.3.2 apparent colour of water: Colour due to dissolved substances and undissolved suspended matter; determined in the original water sample without filtration or centrifugation.

1.3.3 true colour of water: Colour due only to dissolved substances; determined after filtration of the water sample through a membrane filter of pore size 0,45 µm.

Section 2: Visual examination

2.1 Apparatus

2.1.1 Colourless bottle, preferably glass, clean and clear, of capacity at least 1 litre.

2.2 Sampling and samples

Maintain all glassware that will come into contact with the sample in a scrupulously clean condition by washing with hydrochloric acid [c(HCl) ≈ 2 mol/l] or with surfactant cleaning solution which is recommended for laboratory use. Finally rinse with distilled water and allow to drain.

Collect samples in glass bottles of capacity at least 1 litre and carry out the colour test as soon as possible after collection. If storage is unavoidable, store the samples in the dark at 4 °C. Prevent contact between water samples and air during storage, especially in cases where colour-changing redox reactions are likely to occur. Also avoid variations in temperature.

2.3 Procedure

Put the unfiltered water sample into a bottle (2.1) and examine the sample in diffused light against a white background for colour intensity and hue. If the sample contains suspended matter, if possible allow the suspended matter to settle before examination.

2.4 Expression of results

State the intensity of the colour (nil, pale, light or dark) and the hue (e.g. yellow, yellowish brown).

EXAMPLE

Apparent colour according to ISO 7887 Section 2: Visual examination: pale, yellowish brown.