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Standards

Irish Standard  
I.S. EN ISO 17994:2014

# Water quality - Requirements for the comparison of the relative recovery of microorganisms by two quantitative methods (ISO 17994:2014)

## I.S. EN ISO 17994:2014

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN ISO 17994:2014

*Published:*

2014-02-19

*This document was published under the authority of the NSAI and comes into effect on:*

2014-03-01

ICS number:

07.100.20

13.060.70

NOTE: If blank see CEN/CENELEC cover page

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EUROPEAN STANDARD

**EN ISO 17994**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2014

ICS 07.100.20; 13.060.70

Supersedes EN ISO 17994:2004

English Version

**Water quality - Requirements for the comparison of the relative recovery of microorganisms by two quantitative methods (ISO 17994:2014)**

Qualité de l'eau - Exigences pour la comparaison du rendement relatif des microorganismes par deux méthodes quantitatives (ISO 17994:2014)

Wasserbeschaffenheit - Anforderungen für den Vergleich der relativen Wiederfindung von Mikroorganismen durch zwei quantitative Verfahren (ISO 17994:2014)

This European Standard was approved by CEN on 8 February 2014.

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## **Foreword**

This document (EN ISO 17994:2014) 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of an identical text or by endorsement, at the latest by August 2014, and conflicting national standards shall be withdrawn at the latest by August 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 17994:2004.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### **Endorsement notice**

The text of ISO 17994:2014 has been approved by CEN as EN ISO 17994:2014 without any modification.

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# INTERNATIONAL STANDARD

**ISO  
17994**

Second edition  
2014-02-15

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## **Water quality — Requirements for the comparison of the relative recovery of microorganisms by two quantitative methods**

*Qualité de l'eau — Exigences pour la comparaison du rendement  
relatif des microorganismes par deux méthodes quantitatives*



Reference number  
ISO 17994:2014(E)

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**ISO 17994:2014(E)**



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Published in Switzerland



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## ISO 17994:2014(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.

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 documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2, [www.iso.org/directives](http://www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received, [www.iso.org/patents](http://www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 147, *Water quality*, Subcommittee SC 4, *Microbiological methods*.

This second edition cancels and replaces the first edition (ISO 17994:2004), which has been technically revised.

## **Introduction**

This International Standard specifies criteria and procedures for comparing the average quantitative results obtained by two microbiological analytical methods, one of which may, but need not, be a standard or reference method.

The methods considered are based on counts of colonies or of positive and negative liquid enrichment tubes (MPN).



# Water quality — Requirements for the comparison of the relative recovery of microorganisms by two quantitative methods

**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 and to ensure compliance with any national regulatory conditions.

**IMPORTANT** — It is absolutely essential that tests conducted in accordance with this document be carried out by suitably qualified staff.

## 1 Scope

This International Standard specifies an evaluation procedure for comparing two methods with established performance characteristics according to ISO/TR 13843 and intended for the quantification of the same target group or species of microorganisms.

This International Standard provides the mathematical basis for the evaluation of the average relative performance of two quantitative methods against chosen criteria for the comparison. It does not provide data for assessment of the precision of the methods being compared. It is appropriate that the precision of methods is assessed as part of their performance characterization.

This International Standard does not provide methods for the verification of method performance characterization in a single laboratory.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8199, *Water quality — General guidance on the enumeration of micro-organisms by culture*

ISO/TR 13843, *Water quality — Guidance on validation of microbiological methods*

## 3 Terms, definitions and symbols

### 3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1.1 General terms

##### 3.1.1.1

##### **comparison trial**

interlaboratory method comparison that involves laboratories which perform paired measurements on several of their own samples with two different methods

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