

STN	Kvalita vody Stanovenie črevných enterokokov Časť 3: Metóda najpravdepodobnejšieho počtu (ISO 7899-3: 2025)	STN EN ISO 7899-3
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Water quality - Enumeration of intestinal enterococci - Part 3: Most probable number method (ISO 7899-3:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/25

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English Version

Water quality - Enumeration of intestinal enterococci -
Part 3: Most probable number method (ISO 7899-3:2025)

Qualité de l'eau - Dénombrement des entérocoques
intestinaux - Partie 3: Méthode du nombre le plus
probable (ISO 7899-3:2025)

Wasserbeschaffenheit - Nachweis und Zählung von
intestinalen Enterokokken - Teil 3: Verfahren zur
Bestimmung der wahrscheinlichsten Keimzahl (ISO
7899-3:2025)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN ISO 7899-3:2025 (E)**Contents**

Page

European foreword.....	3
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European foreword

This document (EN ISO 7899-3:2025) 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of an identical text or by endorsement, at the latest by February 2026, and conflicting national standards shall be withdrawn at the latest by February 2026.

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Endorsement notice

The text of ISO 7899-3:2025 has been approved by CEN as EN ISO 7899-3:2025 without any modification.



International Standard

ISO 7899-3

Water quality — Enumeration of intestinal enterococci —

Part 3: Most probable number method

Qualité de l'eau — Dénombrement des entérocoques intestinaux —

Partie 3: Méthode du nombre le plus probable

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
5 Apparatus	2
6 Culture media and reagents	3
6.1 General	3
6.2 Basic materials	3
6.3 Diluent	3
6.4 Antifoam	3
7 Sampling, transportation and storage of samples	3
8 Procedure	3
8.1 Inoculation of media	3
8.1.1 Drinking water	3
8.1.2 Fresh and marine bathing water	4
8.2 Incubation	4
8.3 Examination of results	4
9 Expression of results	4
10 Test report	4
11 Quality assurance	5
Annex A (informative) Additional microbiological information on intestinal enterococci	6
Annex B (normative) Composition of Enterolert-DW	7
Annex C (informative) Validation (performance characteristics) of Enterolert-DW / Quant-Tray for the enumeration of intestinal enterococci from water	8
Bibliography	10

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

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 4, *Microbiological methods*.

A list of all parts in the ISO 7899 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The presence and extent of faecal pollution is an important factor in assessing the quality of a body of water and the risk to human health from enteric infection.

Examination of water samples for the presence of intestinal enterococci (genus *Enterococcus*), normally present in the digestive tract and faeces of humans and homoeothermic (warm-blooded) animals, provides an indication of such contamination.

Their presence can be used to measure the effectiveness of treatment processes during the production of drinking water together with being indicative of ingress and other integrity issues within storage and distribution systems for public supplies.

It is important to note that this document is based upon use of a validated product whose performance characteristics have been established (see [Annex C](#)) and that the examination relies upon the detection of intestinal enterococci based upon the expression of the enzyme β -D-glucosidase without further confirmation (see [Annex A](#)).

Water quality — Enumeration of intestinal enterococci —

Part 3: Most probable number method

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.

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

1 Scope

This document specifies a method for the enumeration of intestinal enterococci in water, including *Enterococcus faecalis*, *Enterococcus faecium*, *Enterococcus durans*, *Enterococcus avium*, *Enterococcus gallinarum*, *Enterococcus hirae*, *Enterococcus casseliflavus*. The method is based on the growth of target organisms in a liquid medium and calculation of the “most probable number” (MPN) of microorganisms by reference to MPN tables or using suitable MPN informatic programs.

This method can be applied to drinking water and bathing water (fresh or marine), together with other similar water types including those containing an appreciable amount of suspended matter, and allows the detection of enterococci at 1 colony-forming unit (CFU) per 100 ml with definitive results within (26 ± 2) h in the presence of heterotrophic bacteria in numbers as high as 1×10^6 per 100 ml of sample.

For bathing waters, fresh and marine, enterococci are best enumerated when samples are diluted 1:10.

The test specified in this document relies upon the detection of intestinal enterococci based upon expression of the enzyme β -D-glucosidase and provides a confirmed result in 24 h without further testing of positive wells.

This document does not apply to bottled waters, for which the method has not been validated and therefore is outside the scope of this document, unless appropriate validation of performance of this method has been undertaken by the laboratory prior to use.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. 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 requirements and guidance for microbiological examinations by culture*

ISO 11133, *Microbiology of food, animal feed and water — Preparation, production, storage and performance testing of culture media*

ISO 19458, *Water quality — Sampling for microbiological analysis*

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