

**VEE KVALITEET. ESCHERICHIA COLI JA COLI-LAADSETE
BAKTERITE LOENDAMINE. OSA 1:
MEMBRAANFILTREERIMISE MEETOD MADALA
BAKTERIAALSE FOONIGA VEELE**

**Water quality - Enumeration of Escherichia coli and
coliform bacteria - Part 1: Membrane filtration method
for waters with low bacterial background flora (ISO
9308-1:2014)**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN ISO 9308-1:2014+A1:2017 sisaldab Euroopa standardi EN ISO 9308-1:2014 ja selle muudatuse A1:2017 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 9308-1:2014+A1:2017 consists of the English text of the European standard EN ISO 9308-1:2014 and its amendment A1:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

Water quality - Enumeration of Escherichia coli and coliform bacteria - Part 1: Membrane filtration method for waters with low bacterial background flora (ISO 9308-1:2014)

Qualité de l'eau - Dénombrement des Escherichia coli et des bactéries coliformes - Partie 1: Méthode par filtration sur membrane pour les eaux à faible teneur en bactéries (ISO 9308-1:2014)

Wasserbeschaffenheit - Zählung von Escherichia coli und coliformen Bakterien - Teil 1: Membranfiltrationsverfahren für Wässer mit niedriger Begleitflora (ISO 9308-1:2014)

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 9308-1:2014) 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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.

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This document supersedes EN ISO 9308-1:2000.

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Endorsement notice

The text of ISO 9308-1:2014 has been approved by CEN as EN ISO 9308-1:2014 without any modification.

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Introduction

The presence and extent of faecal pollution is an important factor in assessing the quality of water and the risk to human health from infection. Examination of water samples for the presence of *Escherichia coli* (*E. coli*), which normally inhabits the bowel of man and other warm-blooded animals, provides an indication of such pollution. Examination for coliform bacteria can be more difficult to interpret because some coliform bacteria live in soil and surface fresh water and are not always intestinal. Therefore, the presence of coliform bacteria, although not a proof of faecal contamination, may indicate failure in treatment, storage, or distribution.

Water quality — Enumeration of *Escherichia coli* and coliform bacteria —

Part 1:

Membrane filtration method for waters with low bacterial background flora

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 part of ISO 9308 specifies a method for the enumeration of *Escherichia coli* (*E. coli*) and coliform bacteria. The method is based on membrane filtration, subsequent culture on a chromogenic coliform agar medium, and calculation of the number of target organisms in the sample. Due to the low selectivity of the differential agar medium, background growth can interfere with the reliable enumeration of *E. coli* and coliform bacteria, for example, in surface waters or shallow well waters. This method is not suitable for these types of water.

This part of ISO 9308 is especially suitable for waters with low bacterial numbers that will cause less than 100 total colonies on chromogenic coliform agar (CCA). These may be drinking water, disinfected pool water, or finished water from drinking water treatment plants.

Some strains of *E. coli* which are β -D-glucuronidase negative, such as *Escherichia coli* O157, will not be detected as *E. coli*. As they are β -D-galactosidase positive, they will appear as coliform bacteria on this chromogenic agar.

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 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 7704, *Water quality — Evaluation of membrane filters used for microbiological analyses*

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

3 Terms and definitions

For the purpose of this document, the definitions given in ISO/IEC Guide 2 and the following apply.