



INTERNATIONAL STANDARD ISO 9308-1:2000 TECHNICAL CORRIGENDUM 1

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Water quality — Detection and enumeration of *Escherichia coli* and coliform bacteria —

Part 1: Membrane filtration method

TECHNICAL CORRIGENDUM 1

Qualité de l'eau — Recherche et dénombrement des Escherichia coli et des bactéries coliformes —

Partie 1: Méthode par filtration sur membrane

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO 9308-1:2000 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 4, *Microbiological methods*.

Page 1

Replace the Scope with the following.

1 Scope

This part of ISO 9308 describes a reference method (Standard Test) for the detection and enumeration of *Escherichia coli* and coliform bacteria in water for human consumption. The Standard Test has a low selectivity, allowing the detection of injured bacteria. Due to the low selectivity, background growth can interfere with the reliable enumeration of coliform bacteria and *E. coli*, for example in some drinking waters, like shallow well waters or surface waters. This method is not suitable for these types of water. The Standard Test is based on membrane filtration, subsequent culture on a differential agar medium and calculation of the number of target organisms in the sample.

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This part of ISO 9308 is especially suitable for waters with low bacterial numbers. In special cases in which information is needed quickly, it provides a rapid method (Rapid Test) for the detection of *E. coli* only within 24 h in water for human consumption.

The Rapid Test is based on membrane filtration, subsequent culture under selective conditions and calculation of the number of *E. coli* in the sample.

The Standard Test and the Rapid Test can be applied to other kinds of water provided that suspended matter or background flora does not interfere with filtration, culture and counting.

Page 2

Replace 3.1 with the following.

3.1 lactose-positive bacteria

(Standard Test) bacteria capable of forming colonies aerobically at $(36 \pm 2) ^\circ\text{C}$ within (21 ± 3) h on a selective and differential lactose culture medium with the production of acid

Page 4

Replace the last four paragraphs of 8.3 with the following.

Incubate the tube containing L-tryptophan broth (B.2) at $(44,0 \pm 0,5) ^\circ\text{C}$ for (21 ± 3) h and examine for the production of indole by adding 0,2 ml to 0,3 ml of Kovacs' reagent (B.5.1). Development of a cherry-red colour at the surface of the broth confirms the production of indole.

Some strains of *Klebsiella oxytoca* give a positive indole reaction. To prevent these false-positive results, it is recommended to carry out β -glucuronidase test in addition (*E. coli* will give a positive, *K. oxytoca* a negative, reaction).

Count all colonies giving a negative oxidase reaction as **coliform bacteria**.

Count all colonies giving a negative oxidase and a positive indole reaction as ***E. coli***.

NOTE 3 In special cases, the identification of coliform bacteria can be needed, e.g. to distinguish between faecal and aquatic/telluric strains.

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Replace B.5.3 with the following.

B.5.3 Oxidase reagent

Tetramethyl- <i>p</i> -phenylenediamine dihydrochloride	0,1 g
Distilled water	10 ml

This reagent is not stable. It shall be freshly prepared each time it is needed.

WARNING — Tetramethyl-*p*-phenylenediamine dihydrochloride is carcinogenic. The preparation work must be done in a fume cupboard. Use protective gloves and avoid skin contact.