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ISO 11731-2

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Water quality — Detection and enumeration of *Legionella* —

Part 2: Direct membrane filtration method for waters with low bacterial counts

Qualité de l'eau — Recherche et dénombrement des Legionella —

Partie 2: Méthode par filtration directe sur membrane pour les eaux à faible teneur en bactéries

Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 11731-2 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 4, *Microbiological methods*.

ISO 11731 consists of the following parts, under the general title *Water quality — Detection and enumeration of* Legionella:

— *Part 2: Direct membrane filtration method for waters with low bacterial counts*

The general method will be the subject of a future Part 1 of ISO 11731.

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Water quality — Detection and enumeration of *Legionella* —

Part 2:
Direct membrane filtration method for waters with low bacterial counts

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WARNING — Persons using this part of ISO 11731 should be familiar with normal laboratory practice. This part of ISO 11731 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.

1 Scope

This part of ISO 11731 describes a monitoring method for the isolation and enumeration of *Legionella* organisms in water intended for human use (e.g. hot and cold water, water used for washing), for human consumption and for treated bathing waters (e.g. swimming pools). It is especially suitable for waters expected to contain low numbers of *Legionella*. As the growth of *Legionella* may be inhibited by overgrowth of other bacterial colonies on the membrane, the method is only suitable for waters containing low bacterial counts.

2 Normative references

The following referenced documents are indispensable for the application 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 3696:1987, *Water for analytical laboratory use — Specification and test methods*

ISO 8199:—[1)], *Water quality — General guidance on the enumeration of micro-organisms by culture*

ISO 11731:1998, *Water quality — Detection and enumeration of Legionella*

3 Terms and definitions

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

3.1
Legionella
genus of Gram-negative bacteria normally capable of growth in no less than 2 days on buffered charcoal yeast extract agar containing L-cysteine and iron(III), and forming colonies, often white, purple to blue or lime green in colour

NOTE Some species fluoresce under long wavelength UV light. The colonies have a ground-glass appearance when viewed with a low power stereomicroscope. Growth does not occur in the absence of L-cysteine with the exception of *L. oakridgensis* and *L. spiritensis*. *L. oakridgensis* and *L. spiritensis* require L-cysteine and iron for primary isolation but can grow weakly in the absence of added L-cysteine thereafter.

1) To be published. (Revision of ISO 8199:1988)

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