

# INTERNATIONAL STANDARD

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## **Water quality — Detection and enumeration of *Legionella***

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



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.

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.

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

Annexes A, B, C and D of this International Standard are for information only.

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# Water quality — Detection and enumeration of *Legionella*

## 1 Scope

This International Standard describes a culture method for the isolation of *Legionella* organisms and estimation of their numbers in environmental samples.

This method is applicable to all kinds of environmental samples including potable, industrial and natural waters and associated materials such as sediments, deposits and slime.

## 2 Normative reference

The following standard contains provisions, which through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standards are encouraged to investigate the possibility of applying the most recent edition of the standard listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

## 3 Definition

For the purposes of this International Standard, the following definition applies:

### 3.1 *Legionella*

genus of Gram-negative organisms normally capable of growth in not less than 2 days on Buffered Charcoal Yeast Extract agar containing L-cysteine and iron(II), 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. With a very few exceptions, growth does not occur in the absence of L-cysteine.

## 4 Safety

The reagents used in this International Standard should be subject to assessment in accordance with Control of Substances Hazardous to Health.

*Legionella* species can be handled safely by experienced microbiologists on the open bench in a conventional microbiology laboratory conforming to Containment Level 2. Infection is caused by inhalation of the organism and it is advisable therefore to assess all techniques for their ability to produce aerosols. If in doubt, carry out the work in a safety cabinet.