

DIN EN ISO 11731



ICS 07.100.20

Supersedes
DIN EN ISO 11731:2018-03

**Water quality –
Enumeration of Legionella (ISO 11731:2017);
English version EN ISO 11731:2017,
English translation of DIN EN ISO 11731:2019-03**

Wasserbeschaffenheit –
Zählung von Legionellen (ISO 11731:2017);
Englische Fassung EN ISO 11731:2017,
Englische Übersetzung von DIN EN ISO 11731:2019-03

Qualité de l'eau –
Dénombrement des Legionella (ISO 11731:2017);
Version anglaise EN ISO 11731:2017,
Traduction anglaise de DIN EN ISO 11731:2019-03

Document comprises 50 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

A comma is used as the decimal marker.

National foreword

This document (EN ISO 11731:2017) has been prepared by Technical Committee ISO/TC 147 “Water quality” in collaboration with Technical Committee CEN/TC 230 “Water analysis” (Secretariat: DIN, Germany).

The responsible German body involved in its preparation was *DIN-Normenausschuss Wasserwesen* (DIN Standards Committee Water Practice), Subcommittee NA 119-01-03-03 UA “Microbiology” of Working Committee NA 119-01-03 AA “Water examination”.

Designation of the method:

Enumeration of *Legionella* (K 23):

Method DIN EN ISO 11731 — K 23

The DIN documents corresponding to the international documents referred to in this document are as follows:

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|-----------|------------------|
| ISO 3696 | DIN ISO 3696 |
| ISO 8199 | DIN EN ISO 8199 |
| ISO 11133 | DIN EN ISO 11133 |
| ISO 19458 | DIN EN ISO 19458 |

Amendments

This standard differs from DIN EN ISO 11731-2:2008-06 as follows:

- a) the methods according to ISO 11731:1998 and EN ISO 11731:2008 have been combined in this standard; further culture media and confirmation procedures (see annexes) have been included to cover the extended Scope of the standard;
- b) the Scope now covers all kinds of water, including potable, industrial, waste and natural waters and water-related matrices, e.g. biofilms, sediments, etc.;
- c) legionellae in the water sample are concentrated by membrane filtration, diluted or directly plated depending on the origin/characteristics of the sample;
- d) Annex J is a decision matrix for the selection of the appropriate method for the respective sample;
- e) samples expected to contain high numbers of legionellae, e.g. during outbreak investigations, can be processed with or without concentration steps;
- f) to reduce disturbance, parts of the sample can be treated with heat or acid solution or a combination of both treatments;
- g) the standard has been editorially revised.

Compared with DIN EN ISO 11731 the following corrections have been made to the German version:

- a) in Annex H, the last sentence of the third paragraph has been rewritten as follows: *“Da die Bestimmung der Robustheit auf Daten aus dem Ringversuch beruht, kann es sein, dass diese für nicht aufgestockte natürliche Proben nicht repräsentativ sind.”*;
- b) in Annex H, the third sentence of the fifth paragraph has been rewritten as follows: *“Die Proben wurden unter Anwendung des direkten Ausplattierens, der Membranfiltration mit direktem Aufbringen des Membranfilters auf das Nährmedium, der Membranfiltration mit einem anschließenden Abschwemmen und Plattieren nach der Verdünnung der Probe untersucht.”*;
- c) in Figure J.1, Procedure 7 “Acid treatment” and Culture media A (BCYE agar), the letter R is to be replaced by the letter O as this combination is optional.

Previous editions

DIN EN ISO 11731-2: 2008-06

DIN EN ISO 11731: 2018-03

Expert assistance and specialized laboratories will be required to perform the analyses described in this standard. Existing safety requirements are to be observed.

Depending on the objective of the analysis, a check shall be made on a case-by-case basis as to whether and to what extent additional conditions will have to be specified.

This standard contains a standard method for the examination of water, waste water and sludge, that has been developed by *DIN-Normenausschuss Wasserwesen* (DIN Standards Committee Water Practice) in collaboration with the *Wasserchemische Gesellschaft* (Water Chemistry Society), a division of the *Gesellschaft Deutscher Chemiker* (German Chemical Society). The standard method is

Enumeration of *Legionella* (K 23).

Standard methods published as DIN Standards are obtainable from *Beuth Verlag GmbH*, either individually or grouped in volumes. The standard methods included in the loose-leaf publication entitled "*Deutsche Einheitsverfahren zur Wasser-, Abwasser- und Schlammuntersuchung*" will continue to be published by *Beuth Verlag GmbH* and *Wiley-VCH Verlag GmbH & Co. KGaA*.

Standards or draft standards bearing the group title "German standard methods for the examination of water, waste water and sludge" are classified under the following categories (main titles):

General information (group A)

Sensory analysis (group B)

Physical and physicochemical parameters (group C)

Anions (group D)

Cations (group E)

Substance group analysis (group F)

Gaseous constituents (group G)

Parameters characterizing effects and substances (group H)

Microbiological methods (group K)

Test methods using water organisms (group L)

Biological-ecological methods of analysis (group M)

Individual constituents (group P)

Sludge and sediments (group S)

Bio-assays with microorganisms (group T)

Information on parts of these series of standards that have already been published can be obtained from the offices of *DIN-Normenausschuss Wasserwesen*, telephone +49 (30) 2601-2448, or from *Beuth Verlag GmbH*, 10772 Berlin (postal address: Am DIN-Platz, Burggrafenstr. 6, 10787 Berlin).

National Annex NA (informative)

Bibliography

DIN EN ISO 8199, *Water quality — General guidance on the enumeration of microorganisms by culture*

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

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

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

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