

**DIN EN ISO 11885****DIN**

ICS 13.060.50

Supersedes  
DIN EN ISO 11885:1998-04

**Water quality –  
Determination of selected elements by inductively coupled plasma  
optical emission spectrometry (ICP-OES) (ISO 11885:2007)  
English version of DIN EN ISO 11885:2009-09**

Wasserbeschaffenheit –  
Bestimmung von ausgewählten Elementen durch induktiv gekoppelte  
Plasma-Atom-Emissionsspektrometrie (ICP-OES) (ISO 11885:2007)  
Englische Fassung DIN EN ISO 11885:2009-09

Document comprises 36 pages



## National foreword

This standard 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 the *Normenausschuss Wasserwesen* (Water Practice Standards Committee), Technical Committees NA 119-01-03-01-11 AK *Atomspektrometrische Verfahren* and NA 119-01-03 AA *Wasseruntersuchung*.

This standard is part of the series *Deutsche Einheitsverfahren zur Wasser-, Abwasser- und Schlammuntersuchung — Kationen (Gruppe E)* (German standard methods for the examination of water, waste water and sludge — Cations (group E) and describes method E 22.

Designation of method E 22 “Determination of selected elements by inductively coupled plasma optical emission spectrometry”:

### Method DIN EN ISO 11885 — E 22

**As a result of national implementation in Germany, the following should be noted:**

In 3.10 limit of detection  $X_{LD}$ , in the key of  $s_0$ , reference is made to ISO/TS 13530:2009.

$s_0$  is the standard deviation of the outlier-free results of at least **ten** measurements of a reagent blank solution (3.14).

The DIN Standards corresponding to the International Standards referred to in this document are as follows:

ISO 3696	DIN ISO 3696
ISO 5667-1	DIN EN ISO 5667-1
ISO 5667-3	DIN EN ISO 5667-3
ISO 5667-15	E DIN EN ISO 5667-15
ISO 7027	DIN EN ISO 7027
ISO 8466-1	DIN 38402-51
ISO 15587-1	DIN EN ISO 15587-1
ISO 15587-2	DIN EN ISO 15587-2

Expert assistance and specialized laboratories will be required to perform the analysis described in this standard. Existing safety regulations are to be taken into account.

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.

### German standard methods for the examination of water, waste water and sludge

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 jointly by *Wiley-VCH Verlag* and *Beuth Verlag GmbH*.

All standard methods relevant to the *Abwasserverordnung* (Waste Water Regulation) (*AbwV*<sup>1)</sup>) — included in the new Regulation on Section 7a of the *Gesetz zur Ordnung des Wasserhaushaltes* (German Water Management Act<sup>1)</sup>) concerning *Anforderungen an das Einleiten von Abwasser in Gewässer* — together with

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<sup>1)</sup> Registered in the *DITR* database of *DIN Software GmbH*, obtainable from: *Beuth Verlag GmbH*, 10772 Berlin.

the *Abwasserverordnung* and the *Gesetz zur Ordnung des Wasserhaushalts* have been published by *Beuth-Verlag GmbH* as a loose-leaf collection *Analysenverfahren in der Abwasserverordnung — Rechtsvorschriften und Normen (Supplements)*.

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)	(DIN 38402)
Sensory analysis (group B)	(DIN 38403)
Physical and physicochemical parameters (group C)	(DIN 38404)
Anions (group D)	(DIN 38405)
Cations (group E)	(DIN 38406)
Substance group analysis (group F)	(DIN 38407)
Gaseous constituents (group G)	(DIN 38408)
Parameters characterizing effects and substances (group H)	(DIN 38409)
Biological-ecological methods of analysis (group M)	(DIN 38410)
Microbiological methods (group K)	(DIN 38411)
Test methods using water organisms (group L)	(DIN 38412)
Individual constituents (group P)	(DIN 38413)
Sludge and sediments (group S)	(DIN 38414)
Bio-assays with microorganisms (group T)	(DIN 38415)

In addition to the methods described in the DIN 38402 to DIN 38415 series of standards, there are a number of European and International Standards available as DIN EN, DIN EN ISO and DIN ISO Standards, which also form part of the collection of German standard methods.

Information on Parts of these series of standards that have already been published can be obtained from the offices of the *Normenausschuss Wasserwesen*, telephone +49 30 2601-2448, or from *Beuth Verlag GmbH*, Burggrafenstr. 6, 10787 Berlin.

### Amendments

This standard differs from DIN EN ISO 11885:1998-04 as follows:

- a) The standard has been brought in line with the state of the art.
- b) The performance data have been updated on the basis of new interlaboratory trials.
- c) The description of interferences has been given in more detail.
- d) The standard has been editorially revised.

### Previous editions

DIN 38406-22: 1988-03

DIN EN ISO 11885: 1998-04