

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-14115-02-06 according to DIN EN ISO/IEC 17025:2018

Valid from: 01.04.2021

Date of issue: 24.09.2021

Holder of certificate:

SGS INSTIUT FRESENIUS GmbH
Philipp-Reis-Straße 2a, 37075 Göttingen

Tests in the fields:

Selected physico-chemical and chemical analysis of water (groundwater, surface water, swimming pool and bathing pool water) and waste water;

Microbiological and selective chemical examination in accordance with German Drinking Water Ordinance;

Sampling of raw and drinking water, surface water, water from aquifers, from barrages and lakes and running waters, of waste water and of swimming pool and bathing pool water;

Sampling and microbiological analysis of industrial water in accordance with Section 3 (8) 42nd BImSchV;

Specialist modules for water and waste

In sections 1 to 3, the testing laboratory is permitted to apply the listed standardised or equivalent test methods with different versions of the standards without obtaining prior notification and consent from DAkkS.

The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories. Laboratories that conform to the requirements of this standard, operate generally in accordance with the principles of DIN EN ISO 9001.

The certificate together with the annex reflects the status as indicated by the date of issue.

The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de/en/content/accredited-bodies-dakks>.

Abbreviations used: see last page

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This document is a translation. The definitive version is the original German annex to the accreditation certificate.

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1 Analysis of water (groundwater, surface water, swimming pool and bathing pool water) and waste water

1.1 Sampling

DIN EN ISO 5667-1 (A 4) 2007-04	Water quality - Sampling - Part 1: Guidance on the design of sampling programmes and sampling techniques
DIN 38402-A 11 2009-02	Sampling of waste water
DIN 38402-A 12 1985-06	Sampling from barrages and lakes
DIN 38402-A 13 1985-12	Sampling from aquifers
DIN ISO 5667-5 (A 14) 2011-02	Guidance on sampling of drinking water from treatment works and piped distribution systems
DIN 38402-A 15 2010-04	Sampling from running waters
DIN EN ISO 5667-3 (A 21) 2013-03	Water quality - Sampling - Part 3: Guidance on the preservation and handling of water samples
DIN 38402-A 30 1998-07	Pretreatment, homogenisation and aliquotation of non-homogeneous water samples

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DIN EN ISO 19458 (K 19) Sections 4.4.3 and 4.4.4.1 2006-12	Water quality - Sampling for microbiological analysis <i>(Here for sampling of swimming pool and bathing pool water)</i>
DIN 19643-1 section 14.2 2012-11	Treatment of swimming pool and bathing pool water - Part 1: General requirements <i>(Here: For sampling)</i>
UBA Recommendation of 4.12.2013	Recommendation of the German Federal Environment Agency on sampling of drinking water and bathing pool water and sample transport
DIN EN ISO 19458 (K 19) 2006-12	Water quality - Sampling for microbiological analysis

1.2 Flavour and aroma

DEV B 1/2 1971-01	Test for odour and flavour
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1.3 Physical and physico-chemical parameters

DIN EN ISO 7887 (C 1) 2012-04	Water quality - Examination and determination of colour
DIN EN ISO 7027 (C 2) 2000-04	Water quality - Determination of turbidity
DIN 38404-C 4 1976-12	Determination of temperature
DIN EN ISO 10523 (C 5) 2012-04	Water quality - Determination of pH
DIN 38404-C 6 1984-05	Physical and physico-chemical parameters, determination of the oxidation reduction (redox) potential
DIN EN 27888 (C 8) 1993-11	Water quality - Determination of electrical conductivity

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1.4 Gaseous components

DIN EN ISO 5814 (G 22) 2013-02	Water quality - Determination of dissolved oxygen - Electrochemical probe method
DIN ISO 17289 (G 25) 2014-12	Water quality - Determination of dissolved oxygen - Optical sensor method
In-house method SOP M 1662 2014-10	Photometric determination of free chlorine, total chlorine and chlorine dioxide as well as ozone and bromine

1.5 Microbiological analysis of groundwater, surface water, bathing water as well as swimming pool and bathing pool water and water from re cooler systems

DIN EN ISO 9308-2 (K 6-1) 2014-06	Water quality - Enumeration of Escherichia coli and coliform bacteria - Part 2: Most probable number method
DIN EN ISO 16266 (K 11) 2008-05	Detection and enumeration of <i>Pseudomonas aeruginosa</i> - Membrane filtration method
DIN EN ISO 9308-1 (K 12) 2017-09	Water quality - Enumeration of Escherichia coli and coliform bacteria - Part 1: Membrane filtration method for waters with low bacterial background flora
DIN EN ISO 7899-2 (K 15) 2000-11	Water quality - Detection and enumeration of intestinal enterococci - Part 2: Membrane filtration method
DIN EN ISO 11731 (K 23) 2019-03	Water quality - Enumeration of legionella
TrinkwV Section 15 (1c)	Determination of colony count at 22 °C and 36 °C
DIN EN ISO 14189 (K 24) 2016-11	Water quality - Enumeration of Clostridium perfringens - Method using membrane filtration

2 Tests in accordance with the German Drinking Water Ordinance - TrinkwV -

Sampling

Method	Title
DIN EN ISO 5667-1 (A 4) 2007-04	Water quality - Sampling - Part 1: Guidance on the design of sampling programmes and sampling techniques
DIN ISO 5667-5 (A 14) 2011-02	Water quality - Sampling - Part 5: Guidance on sampling of drinking water from treatment works and piped distribution systems
DIN EN ISO 5667-3 (A 21) 2013-03	Water quality - Sampling - Part 3: Preservation and handling of water samples
DIN EN ISO 19458 (K 19) 2006-12	Water quality - Sampling for microbiological analysis
Recommendation of the Federal Environment Agency 18 December 2018	Assessment of the quality of drinking water with respect to the parameters lead, copper and nickel

ANNEX 1: MICROBIOLOGICAL PARAMETERS

PART I: General requirements for drinking water

No.	Parameter	Method
1	Escherichia coli (E. coli)	DIN EN ISO 9308-1 (K 12) 2017-09
		DIN EN ISO 9308-2 (K 6-1) 2014-06
2	Enterococci	DIN EN ISO 7899-2 (K 15) 2000-11

PART II: Requirements for drinking water intended for transfer in sealed containers

No.	Parameter	Method
1	Escherichia coli (E. coli)	DIN EN ISO 9308-1 (K 12) 2017-09
		DIN EN ISO 9308-2 (K 6-1) 2014-06
2	Enterococci	DIN EN ISO 7899-2 (K 15) 2000-11
3	Pseudomonas aeruginosa	DIN EN ISO 16266 (K 11) 2008-05

ANNEX 2: CHEMICAL PARAMETERS

PART I: Chemical parameters whose concentration does not usually increase in the distribution network, including the drinking water installation

Not used

PART II: Chemical parameters whose concentration may increase in the distribution network, including the drinking water installation

Not used

ANNEX 3: INDICATOR PARAMETERS

Part I: General indicator parameters

No.	Parameter	Method
1	Aluminium	Not used
2	Ammonium	Not used
3	Chloride	Not used
4	Clostridium perfringens (including spores)	DIN EN ISO 14189 (K 24) 2016-11
5	Coliform bacteria	DIN EN ISO 9308-1 (K 12) 2017-09
		DIN EN ISO 9308-2 (K 6-1) 2014-06
6	Iron	Not used
7	Colouring (spectral absorption coefficient Hg 436 nm)	Not used
8	Odour (as TON)	DIN EN 1622 (B 3) 2006-10 (Annex C)
9	Taste	DIN EN 1622 (B 3) 2006-10 (Annex C)
10	Colony count at 22 °C	DIN EN ISO 6222 (K 5) 1999-07
		TrinkwV Section 15 (1c)
11	Colony count at 36 °C	DIN EN ISO 6222 (K 5) 1999-07
		TrinkwV Section 15 (1c)
12	Electrical conductivity	DIN EN 27888 (C 8) 1993-11
13	Manganese	Not used
14	Sodium	Not used
15	Organically bound carbon (TOC)	Not used
16	Oxidisability	Not used
17	Sulphate	Not used
18	Turbidity	Not used
19	Hydrogen ion concentration	DIN EN ISO 10523 (C 5) 2012-04
20	Calcite dissolving capacity	Not used

Part II: Specific requirements for drinking water in systems in the drinking water installation

Parameter	Method
Legionella spec.	ISO 11731 2017-05 UBA recommendation 18 December 2018

APPENDIX 3a: Requirements for drinking water with regard to radioactive substances

Not used

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Parameters not included in Annexes 1 to 3 of the German Drinking Water Ordinance

Additional periodic testing

Not used

The accreditation does not replace the recognition or approval procedure of the competent authority pursuant to Section 15 (4) TrinkwV.

3 Sampling and microbiological analysis of industrial water in accordance with Section 3 (8) 42nd BImSchV

Sampling

Method	Title
DIN EN ISO 19458 (K 19) 2006-12	Water quality - Sampling for microbiological analysis
	Recommendation of the Federal Environmental Agency for the sampling and detection of Legionella in evaporative cooling plants, cooling towers and wet separators dated 06.03.2020, Sections C and D

Microbiological analyses

Parameter	Method
Legionella	DIN EN ISO 11731 (K 23) 2019-03
	Recommendation of the Federal Environmental Agency for the sampling and detection of Legionella in evaporative cooling plants, cooling towers and wet separators dated 06.03.2020, Sections E and F taking into account Annexes 1 and 2
Colony count at 22°C and 36 °C	DIN EN ISO 6222 (K 5) 1999-07

4 List of test methods for the specialist module for WATER

Revised: LAWA 18/10/2018

Section 1: Sampling and general parameters

Parameter	Method	Was	Sur	Raw
Sampling of waste water	DIN 38402-A 11: 2009-02	<input checked="" type="checkbox"/>		
Sampling from running waters	DIN EN ISO 5667-6: 2016-12 (A 15)		<input checked="" type="checkbox"/>	

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Parameter	Method	Was	Sur	Raw
Sampling from aquifers	DIN 38402-A 13: 1985-12			<input checked="" type="checkbox"/>
Sampling from barrages and lakes	DIN 38402-A 12: 1985-06		<input checked="" type="checkbox"/>	
Homogenisation of samples	DIN 38402-A 30: 1998-07	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Temperature	DIN 38404-C 4: 1976-12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
pH value	DIN EN ISO 10523: 2012-04 (C 5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Conductivity (25 °C)	DIN EN 27888: 1993-11 (C 8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Odour	DIN EN 1622: 2006-10 (B 3) Annex C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Colouring	DIN EN ISO 7887: 2012-04 (C 1), Verfahren A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Turbidity	DIN EN ISO 7027: 2000-04 (C 2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Oxygen	DIN EN ISO 5814: 2013-03 (G 22)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DIN ISO 17289: 2014-12 (G 25)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DIN EN 25813: 1993-01 (G 21)		<input type="checkbox"/>	<input type="checkbox"/>
Redox potential	DIN 38404-C 6: 1984-05	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

Section 2: Photometry, ion chromatography, titrimetry

Not used

Section 3: Elemental analysis

Not used

Section 4/5: Group and sum parameters

Not used

Section 6: Gas chromatographic methods

Not used

Section 7: HPLC methods

Not used

Section 8: Microbiological methods

Not used

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Section 9.1: Biological methods, bio-assays (part 1)

Not used

Section 9.2: Biological methods, bio-assays (part 2)

Not used

5 List of test methods for the specialist module for WASTE 2018-05

Revised: LAGA, May 2018

Test area 1: Sewage sludge

	Sections / Parameters	Basis / Methods	
		AbfklärV	
1.1	Sampling and sample preparation	Section 32 (3) and (4) AbfklärV	
a)	Sampling	DIN EN ISO 5667-13 (08.11) and DIN 19698-1 (05.14)	<input checked="" type="checkbox"/>
b)	Sample preparation	DIN 19747 (07.09)	<input checked="" type="checkbox"/>

Sections 1.2 to 1.8

Not used

Test area 2: Base

	Sections / Parameters	Basis / Methods	
		AbfklärV and BioAbfV	
2.1	Sampling and sample preparation	Section 32 (2) AbfklärV and Section 9 BioAbfV	
a)	Sampling	DIN ISO 10381-1 (08.03) and DIN ISO 10381-4 (04.04)	<input checked="" type="checkbox"/>
b)	Sample preparation	DIN ISO 19747 (07.09)	<input checked="" type="checkbox"/>

Section 2.2

Not used

Test area 3: Biowaste

Not used

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Test area 4: Waste oil, insulating liquid

Not used

Test area 5: Landfill waste

	Sections/ Parameter	Basis/ Method	
		Section 6 (2), Section 8 (1), (3) and (5) DepV	
5.1	Sampling	LAGA PN 98 (12.01)	<input checked="" type="checkbox"/>

Sections 5.2 to 5.4

Not used

Test area 6: Wood waste

Not used

Abbreviations used

DEV	Deutsche Einheitsverfahren (German standard methods)
DIN	Deutsches Institut für Normung e. V. (German Institute for Standardization)
DVGW	Deutscher Vereinigung des Gas- und Wasserfaches e.V. (German Association of the Gas and Water Industry)
EN	European standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
LAGA	Bund/Länder-Arbeitsgemeinschaft Abfall (Federal/Regional Working Group on Waste)
LAWA	Bund/Länder-Arbeitsgemeinschaft Wasser (Federal/Regional Working Group on Water)
TrinkwV	German Drinking Water Ordinance
UBA	Umweltbundesamt (Federal Environment Agency)

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