

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-17150-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 20.08.2019

Date of issue: 20.08.2019

Holder of certificate:

Henkel AG & Co. KGaA
Corporate Scientific Services
Henkelstraße 67, 40589 Düsseldorf

Tests in the fields:

physical, physico-chemical, chemical and safety technical investigations of chemical products such as inorganic and organic chemicals, biological materials, textiles and fibers, dyestuffs and pigments, oils, fats, waxes, resins, emulsifiers, additives, surfactants, polymers, ceramics, minerals, glass, foils, rubber, plastics and plastic additives as well as of gases, dust, metals and coal, food additives, biocidal products and preservatives as well as raw materials, intermediate and final products of cosmetics, disinfectants, detergents and cleansing agents, adhesives and sealants and cooling lubricants;

efficacy testing of disinfectants;

microbiological analysis of plastics and other sealing materials;

investigations of cosmetic products and their ingredients;

physical, physico-chemical, chemical und microbiological investigation of water (wastewater, raw water, process water, industrial water, leakage water, cooling water and water from re cooler systems and of pipeline bound water dispensers);

sampling of raw water, process water, cooling water and water from re cooler systems as well as of pipeline bound water dispensers;

sampling and microbiological analysis of industrial water according to §3 section 8 42. BImSchV;

sensory, microbiological and selected chemical analyses according to Drinking Water Regulation, sampling of raw water and drinking water

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

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

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Within the given testing field marked with *, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent test methods.

Within the given testing field marked with **, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the modification, development and refinement of test methods. The listed test methods are exemplary.

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to apply the standardized or equivalent test methods in different versions listed in this document.

The testing laboratory maintains a current list of all test methods within the flexible scope of accreditation.

1 Investigation of chemical products

1.1 Physical, physico-chemical and chemical investigations of raw materials, intermediate and final products

1.1.1 Structure elucidation via NMR-spectroscopy **

11X12004. E3 Assay Determination of L-Lysine Hydrochloride via ¹H-NMR
2016-10

11X13001. E3 Assay Determination of Histidine via ¹H-NMR
2016-10

11X13002. E3 Assay Determination of Ornithine hydrochloride via ¹H-NMR
2016-10

1.1.2 Determination of parameters via infrared spectroscopy (FT-IR) **

13X14001.01 Investigation of the curing process of polyurethane-hotmelts via infrared
2014-05 spectroscopy

13K02001.02 Determination of the mixing ratio resin/curing agent in cured PU laminating
2015-12 adhesives via infrared spectroscopy

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1.1.3 Determination of ingredients and additives as well as contaminants via gas chromatography with conventional detectors (GC-FID, GC-TEA-detection) **

21X01003.01 2001-09	Gas chromatographic assay of the active ingredient n-propanol in a disinfectant
21X01006.01 2001-11	Gas chromatographic assay of the active ingredients ethanol und iso-propanol in disinfectants
21X09004.01 2009-12	Determination of ethanol and 2-propanol in hospital-hygiene products
21X13001.01 2014-01	Determination of organic solvents in aqueous or water containing matrices by the example of disinfectants
26X07010.01 2008-01	Gas chromatographic trace analysis of N-Nitrosodiethanolamine in shampoos after column chromatographic enrichment and derivatization
26X14001.01 2014-02	Determination of the N-NO-content (total N-Nitroso) according to the chemiluminescence-method

1.1.4 Determination of ingredients and additives as well as contaminants via HPLC with conventional detectors (HPLC-PDA, HPLC-ELSD, HPLC-FLD, HPLC-RID, HPLC-LFD) **

22X04004.03 2015-12	Liquid chromatographic trace analysis of 2,4-diaminotoluene, 2,6-diaminotoluene, 2,2'-diaminodiphenylmethane, 2,4'-diaminodiphenylmethane and 4,4'-diaminodiphenylmethane in acetic acid migrates
22X07010.E1 2007-03	Liquid-Chromatographic Trace Analysis of Alkyl (C12-C18)-Amine Polyethylene Glycol Ether (6-20 EO) and Alkyl (C12-C18)-Polyethylene Glycol (< 8 EO)-Polypropylene Glycol (< 8 PO) Ether in Rinse Water Samples in the Context of a Cleaning Validation
22X07014.01 2007-06	Determination of preservatives in cosmetics
22X13004.02 2015-12	Liquid chromatographic determination of formaldehyde und acetaldehyde in wash solutions from emission measurements
22X13005.01 2013-06	Liquid chromatographic determination of ethanolamine and diethanolamine in wash solutions from emission measurements
22X14006.01 2014-12	Liquid chromatographic determination von D-panthenol in cosmetic formulations via UPLC™

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22X14007.02 2015-12	Liquid chromatographic determination of formaldehyde in dispersion adhesives via UPLC™
22X14008.01 2015-01	Liquid chromatographic determination of vitamin E and vitamin E-acetate in cosmetic formulations via UPLC™
22X14009.01 2015-01	Liquid chromatographic determination of alpha-bisabolol in cosmetic formulations via UPLC™
22X14010.01 2015-01	Liquid chromatographic determination of cetylpyridiniumchloride in cosmetic formulations via UPLC™

1.1.5 Determination of ingredients and additives as well as parameters via gel-permeation-chromatography (GPC-UVD, GPC-UVD-RID) **

22X05019.01 2005-12	Determination of the molar mass average and molar mass distribution of polymers soluble in tetrahydrofuran via gel permeation chromatography
22X08002.E1 2008-04	Determination of Monomeric 4,4'-Methylene-bis-(Phenyl Isocyanate) and 2,4-Toluylene Diisocyanate in Isocyanate-Containing Products Using Gel Permeation Chromatography

1.1.6 Determination of ingredients and additives, contaminants as well as elements via ion chromatography (IC-LFD, IC-UV/VIS-detection) **

23X96002.04 2018-02	Ion chromatographic determination of optical brighteners in detergents
23X06001.02 2015-11	Ion chromatographic determination of chloride and sulfate in rolling oil emulsions
23X09002.02 2016-12	Ion chromatographic determination of tetraacetylenylendiamine (TAED) in raw materials, detergents and cleansing agents
23X10002.01 2010-08	Ion chromatographic determination of quaternary ammonium compounds in disinfectants
23X16001.02 2018-01	Trace determination of fluorine and sulfur in fatty acid esters via combustion IC
23X17001.E1 2018-01	Determination of the Stabilizer Hydroxyethane-1,1-Diphosphonic Acid (HEDP) in Peracetic Acid Solutions using Ion Chromatography and Conductivity Detection

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1.1.7 Determination of ingredients and additives via thin layer chromatographic investigations (DC) **

24X96001.03 2018-11	Determination of Alkyl Polyglycosides in Consumer Products by Thin Layer Chromatography
24X00001.01 2000-09	Thin layer chromatographic determination of fatty acid-EO-methylester in Glucopon 600
24X00002.01 2000-08	Determination of free glycerol via quantitative thin layer chromatography
24X11001.01 2011-11	Thin layer chromatographic quantification of amphotensides in detergents and cleansing agents as well as cosmetic products
24X12001.01 2012-04	Determination of polyethylenglycol in detergents and cleansing agents
24X12002.01 2012-04	Determination of amines in technical products

1.1.8 Determination of ingredients and additives as well as contaminants via gas chromatography with mass selective detectors (GC-MS-; thermo desorption-GC-MS-, GC/GC-TOF-MS-coupling techniques) **

21X13002.01 2014-01	Quantification of volatile compounds using deuterated standards via head-space-GC/MS by the example of 1,4-dioxane
21X13004.01 2014-01	Quantification of volatile compounds via head-space-GC/MS with the standard addition method by the example of 1,4-dioxane
26X11001.01 2013-11	Determination of methanol via headspace/GC-MS in glycerol
26X13001.01 2013-01	Determination of the emission of volatile organic compounds (VOC) from flooring adhesives via simplified test-chamber process
26X13007.01 2013-10	Quantification of organic substances using deuterated internal standards by the example of dimethylsulfate (DMS)
26X14004.01 2014-08	Determination of phthalic acid esters via GC/GC-TOF-MS

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26X16002.01 2017-08	Determination of water solubility using the flask method according to the OECD-test guideline 105 by the example of bisabolol
26X16003.01 2017-08	Determination of water solubility using the column elution method according to the OECD-test guideline 105 by the example of nonylphenoethoxylate
26X17001.01 2017-04	Determination of benzylbenzoate in ethylhexylbenzoate via GCxGC-TOF/MS-coupling

1.1.9 Determination of ingredients and additives as well as contaminants via HPLC with mass selective detectors (HPLC-ESI-MS-, APIC-MS-coupling techniques) **

26X09002.01 2009-05	Liquid chromatographic trace determination of alkyl (C12-C18)-polyethylenglycol-(<8 EO)-polypropylenglycol-(<8 PO)-ether in swab-samples in the context of cleansing validations
26X12003.01 2012-12	Trace quantification of didecyldimethylammoniumchloride on artificial sausage skin via HPLC-ESI-MS
26X13002.01 2013-06	Trace quantification of Bitrex (denatoniumbenzoate) via LC-ESI-MS
26X13003.01 2013-03	Trace quantification of benzalconiumchloride (BAC) via HPLC-ESI-MS

1.1.10 Determination of ingredients and additives as well as parameters by photometric investigations (UV-VIS-range) **

31N14001.01 2012-03	Colorimetric characterization of glycerol expressed as Hazen-colour scale
31X00002.04 2017-06	Enzymatic determination of citric acid via test-combination of Böhlinger corp. in detergents and cleansing agents
31X01001.01 2004-02	Determination of cellulase activity in enzyme preparations and finished products at pH 6.5
31X16001.01 2016-10	Photometric determination of proteins according to the Bradford-method

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1.1.11 Titrimetric determination of ingredients and parameters **

35N77001.03 2015-09	Saponification number
35N81001.02 2000-09	Acid number
35N84001.02 2000-09	Peroxide number
35N99001.E3 2003-02	Determination of Epoxy Equivalent
35N99003.03 2018-09	Assay of primary, secondary and tertiary amine nitrogen
32X95001.02 2000-07	Water Determination according to Karl Fischer (2-component titration) in various matrices
32X98007.03 2007-02	Quantitative determination of anionic surfactants in raw materials as well as detergents and cleansing agents via potentiometric two-phase titration
32X99011.06 2017-06	Potentiometric determination of active oxygen and active oxygen carriers in detergents and cleansing agents as well as raw materials
32X99019.03 2007-04	Quantitative determination of fatty acids or soaps in raw materials and detergents via potentiometric two-phase titration
32X02001.03 2007-08	Determination of the alkaline or acid reserve as well as of the pH-value for classification of products (irritative, caustic according to Young et al.)
32X07001.01 2007-01	Manganometric determination of hydrogen peroxide in liquid bleach
32X16001.E1 2016-01	Quantitative Determination of Hydrogen Peroxide in Hydrogen Peroxide containing Formulations by means of Iodometric Titration
32X16008.E1 2016-07	Quantitative Determination of Active Chlorine in a Powdered Detergent by means of Iodometric Titration
33X95002.03 2012-12	Trace determination of water in various substances via coulometric Karl Fischer titration

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35X02001.01 Carbonyl number
2003-01

1.1.12 Incident light, incident light and scattered light measurement

(S)13X11001.03 Determination of particle size distribution via laser light scattering
2018-08

1.1.13 Conventional methods

Commission Surface tension of aqueous solutions
Regulation
(EC) no. 440/2008
method A.5
2008-05

34N08001.02 Determination of the density
2014-02

34N12002.02 Determination of the refractive index
2014-02

34X17001.02 Determination of the contact resistance of metallic surfaces
2018-07

1.1.14 Determination of sum parameters via gravimetry **

36X95002.02 Determination of ash from products and raw materials
2000-09

36X99001.03 Gravimetric determination of carbonate in detergents and cleansing agents
2017-06 via easily released CO₂ under acidic conditions by the example of sodium
carbonate

36X07001.01 Total volatile components in detergents and cleansing agents
2007-04

36X07002.01 Determination of ethanol-soluble parts in liquid detergents and cleansing
2007-05 agents

36X09001.01 Determination of nonionic parts in detergents and cleansing agents
2009-09

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1.1.15 Determination of elements via atomic absorption spectrometry (F-AAS, GF-AAS) **

41X96004.04 2013-11	Determination of the nickel content in fatty chemical products
41X98007.03 2013-06	Trace determination of tin in organic matrices

1.1.16 Determination of elements via inductively coupled plasma atomic emission spectrometry (ICP-OES) **

41X14004.01 2015-01	Determination of heavy metals in detergents and dishwashing detergents via atomic emission spectrometry (ICP-OES)
41X14005.01 2015-01	Determination of elements in ACC-baths via ICP-OES
41X14006.02 2015-12	Determination of organically bound silicon (polydimethylsiloxanes) in fabric softener samples

1.1.17 Determination of elements via inductively coupled plasma mass spectrometry (ICP-MS) **

41X13001.02 2016-08	Trace determination of heavy metals in nitric acid soluble organic compounds
41X14007.03 2017-06	Trace determination of heavy metals in pigment containing samples and raw materials via plasma mass spectrometry (ICP-MS) after pressure digestion according to § 64 LFGB, K 84.00-29
41X17003.01 2017-11	Determination of elemental impurities in organic raw materials after mineralization via plasma mass spectrometry (ICP-MS)

1.1.18 Determination of elements, ingredients and additives via X-Ray fluorescence analysis (XRF) of solid fusion samples **

42X00001.02 2007-08	Determination of silicon, aluminium, phosphorus etc. in detergents and cleansing agents and their raw materials
42X06001.02 2006-12	Assay of silicon in Silicea Calcium capsules

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42X09001.01 2009-08	X-Ray fluorescence determination of fillers in adhesives and sealants
42X09002.01 2009-08	Determination of zinc in various phosphating agents
42X11001.01 2011-03	Determination of sodium, magnesium, potassium, manganese, iron, copper, zinc and molybdenum in multi element-chelates
42X12001.01 2012-04	Determination of the element composition in deposits from metal treatment baths
42X12002.01 2012-12	Quantitative determination of volatile element species via X-Ray fluorescence analysis (XRF) by using a low-melting borate bead by the example of organic silicon compounds

1.1.19 Determination of elements via elemental analysis after combustion **

43X90002.03 2012-03	Determination of oxygen in organic substances
43X00003.02 2012-12	Simultaneous determination of carbon, hydrogen and nitrogen in organic substances with Vario EL (Elementar Analysensysteme corp.)
43X00004.01 2000-09	Simultaneous determination of sulfur and carbon in inorganic and organic substances after combustion using the elemental analyzer SC-144DR (Leco corp.)

1.1.20 Analytical methods according to Commission Regulation (EC) no. 1907/2006 of the European Parliament and the of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

Commission Regulation (EC) no. 440/2008 method C.7 2008-05	Degradability – abiotic degradation: hydrolysis depending on the pH-value
Commission Regulation (EC) no. 440/2008 method A.6 2014-03	Water solubility

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Commission Regulation Partition coefficient
(EC) no. 440/2008
method A.8
2008-05

Commission Regulation 1-Octanol/water partition coefficient: Slow stirring method
(EC) no. 440/2008
method A.23
2014-03

1.1.21 Electron microscopic investigations for characterization of inorganic and organic materials via REM and TEM as well as semi-quantitative determination of the elemental composition via EDX **

61K00001.03 2017-06	Investigation of surface morphologies / particle sizes using a scanning electron microscope
61K00003.03 2018-11	Electron microscopic investigations regarding the mechanism of formation of encrustations using soluble siliceous detergent builders
61K00004.01 2000-08	Characterization of soluble siliceous builder systems
62K00001.03 2013-01	Cryo preparation and characterization of vesicles via transmission electron microscopy
62K00003.03 2013-01	Preparation of liposomes for transmission electron microscopic investigations and their characterization
62K08001.03 2018-11	Preparation of cross-sections through the skin for transmission electron microscopic investigations and their characterization
64K00001.03 2017-06	Determination of the elemental composition via energy dispersive X-Ray-micro-analysis of surfaces

1.1.22 Characterization and semi-quantitative phase determination via X-Ray-diffraction (XRD) **

65K00002.02 2003-07	Determination of the ratio hopeit/phosphophyllit on phosphated iron sheets
65K00004.02 2010-12	Detection of active carbon carriers and metasilicates in dishwashing detergents

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65K00005.01 2000-08	Semi-quantitative phase determination of Mn-containing phosphatizing layers
65K02001.02 2010-12	Determination of the ratio hopeit/phosphophyllit on phosphated iron sheets (P-Ratio)
65K08001.02 2012-05	Determination of a layered silicate in powders and tablets of dish washing (GSM-detergents) and laundry detergents

1.2 Safety-technological tests

1.2.1 Determination of the caloric characteristics via calorimetric methods **

DIN 51006 2005-07	Thermal analysis (TA) - Thermogravimetry (TG) - basics
DIN 51007 1994-06	Thermal analysis (TA); differential thermal analysis (DTA); basics
(S)31X93002.02 2004-07	Determination of the boiling point (T _b) of solid and liquid compounds via DSC
(S)31X02001.01 2004-06	Risk of explosion of solid and liquid compounds, preliminary test via DSC
(S)31X07001.01 2007-05	Determination of the vapor pressure curve of solid and liquid compounds via DSC
(S)31X10001.01 2010-11	Determination of the specific heat capacity cp of solid and liquid compounds via DSC
(S)31K04003.01 2004-07	TGA-overview diagram under nitrogen atmosphere or in air using standard conditions and general information
(S)23K06015.01 2006-07	Discoloration Temperature

1.2.2 Determination of flash point and fire point via positive ignition in the gas phase **

(S)21N04003.03 2017-08	Determination of flash point of flammable liquids in the range of 40 °C to 370 °C, closed-cup procedure according to Pensky-Martens
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(S)21N04004.01 2004-09	Determination of flash and fire point of flammable liquids in the range of 80 °C to 400 °C, open-cup procedure according to Cleveland
(S)21N04005.04 2017-06	Determination of flash point of flammable liquids in the range of -30 °C to 300 °C, equilibrium method using a closed-cup for 2 ml / 4 ml respectively

1.2.3 Fire behavior test using conventional methods

VDI guideline 2263, sheet 1, 1.2, 1990-05	Dust fires and dust explosions; danger, evaluation, protection measures; test methods for determination of safety-technological parameters of dusts
UN manual test O.1 - section 34.4.1; ST/SG/AC.10/11/ rev. 6, 2015	Recommendations for the transport of dangerous goods, manual of tests and criteria: test for oxidizing solids
(S)21N04007.03 2014-01	Determination of sustained combustion of liquids with a flash point of 23°C to 60°C

1.2.4 Determination of the ignition behavior via detection of spontaneous temperature rise or visual inspected ignition *

UN manual test H.4 - section 28.4.4; ST/SG/AC.10/11/ rev. 6, 2015	Recommendations for the transport of dangerous goods, manual of tests and criteria: heat accumulation storage test
UN manual test N.4 - section 33.3.1.6 ST/SG/AC.10/11/ rev. 6, 2015	Recommendations for the transport of dangerous goods, manual of tests and criteria: test methods for self-heating substances
Commission Regulation (EC) no. 440/2008 method A.16 2008-05	Relative self-ignition temperature for solids
Commission Regulation (EC) no. 440/2008 method A.12 2008-05	Flammability (water contact)

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Commission Regulation Pyrophoric properties of solid and liquid substances
(EC) no. 440/2008
method A.13
2008-05

DIN 51794 Investigation of petroleum-derived hydrocarbons – determination of
2003-05 ignition point

1.2.5 Determination of physical properties of auxiliary value for safety-technological tests according to chapter 1.2

DIN 66165-2 Particle size analysis – sieve analysis - part 2: procedure
2016-08

AdR, chapter 2.3.4 Test for determination of flow properties
2014-12 (AdR: Accord européen relatif au transport international des marchandises dangereuses par Route)

(S)52N10001.02 Metal corrosiveness
2015-09

1.2.6 Determination of explosion behavior of dust material by using safety testing devices

DIN EN 13821 Potentially explosive atmospheres – explosion prevention and protection –
2003-03 determination of minimum ignition energy of dust/air-mixtures

DIN EN 14034-1 Determination of explosion characteristics of dust clouds –
2011-04 part 1: determination of the maximum explosion pressure p_{max} of dust clouds

DIN EN 14034-2 Determination of explosion characteristics of dust clouds –
2011-04 part 2: determination of the maximum rate of explosion pressure rise $(dp/dt)_{max}$ of dust clouds

(S)23N05001.02 Determination of minimum ignition energy of solid substances
2018-07

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1.2.7 Determination of explosivity of condensed solids or pasty substances

Commission Regulation Mechanical sensitivity (shock)
(EC) no. 440/2008
method A.14
2008-05

Commission Regulation Mechanical sensitivity (friction)
(EC) no. 440/2008
method A.14
2008-05

UN manual test C.2 Recommendations for the transport of dangerous goods, manual of tests
ST/SG/AC. 10/11/ and criteria: deflagration test
rev. 6, 2015

2 Efficacy testing of disinfectants

2.1 Efficacy testing of disinfectants in chemical products including industrial, domestic and institutional areas, food, veterinary medicine and hospital hygiene (with the exception of medical products) via cultural microbiological tests **

DIN EN 13727 Chemical disinfectants and antiseptics - quantitative suspension test for the
2015-12 evaluation of the bactericidal activity in the medical area – test method and requirements (phase 2, step 1)
(scope of application: *no testing and statements of conformity of medical products*)

DIN EN 13624 Chemical disinfectants and antiseptics - quantitative suspension test for the
2013-12 evaluation of the fungicidal or yeasticidal activity in the medical area - test method and requirements (phase 2, step 1)
(scope of application: *no testing and statements of conformity of medical products*)

AA HSA A.1.1-178 Quantitative suspension test for the evaluation of the mycobactericidal
2018-08 activity of chemical disinfectants in the medical area including instrument disinfectants
(scope of application: *no testing and statements of conformity of medical products*)

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DIN EN 17126 (draft) 2017-06	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the fungicidal or sporicidal activity in the medical area - test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
VAH-methods 2015-04	Requirements and methods for VAH certification of chemical disinfection procedures - method 7: Evaluation of bactericidal and yeasticidal activity as well as of suitable neutralizing agents
VAH-methods 2015-04	Requirements and methods for VAH certification of chemical disinfection procedures - method 8: Evaluation of bactericidal and yeasticidal activity in a qualitative suspension test
VAH-methods 2015-04	Requirements and methods for VAH certification of chemical disinfection procedures - method 9: Evaluation of the bactericidal, yeasticidal, fungicidal, tuberculocidal or mycobactericidal activity in a quantitative suspension test
DIN EN 1040 2006-03	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of basic bactericidal activity of chemical disinfectants and antiseptics - test method and requirements (phase 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 1275 2006-03	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of basic fungicidal or yeasticidal activity of chemical disinfectants and antiseptics - test method and requirements (phase 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 1276 2010-01	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the bactericidal activity of chemical disinfectants and antiseptics in food, industrial, domestic and institutional areas – test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 1650 2013-08	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the fungicidal activity of chemical disinfectants and antiseptics in food, industrial, domestic and institutional areas – test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)

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DIN EN 1656 2010-03	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the bactericidal activity of chemical disinfectants and antiseptics used in the veterinary area - test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 1657 2016-11	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the fungicidal or yeasticidal activity of chemical disinfectants and antiseptics used in the veterinary area - test method and requirements (phase 2, step 1); German version EN 1657:2016 (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 14204 2013-02	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the mycobactericidal activity of chemical disinfectants and antiseptics used in the veterinary area - test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 13623 2010-12	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the bactericidal activity against Legionella of chemical disinfectants for aqueous systems - test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 13704 2002-05	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the sporicidal activity of chemical disinfectants in food, industrial, domestic and institutional areas – test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
AA HSA A.1.1-180 2018-08	Quantitative carrier test for the evaluation of the bactericidal or fungicidal / yeasticidal activity of chemical disinfectants and antiseptics used for instruments in the medical area (scope of application: <i>no testing and statements of conformity of medical products</i>)

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AA HSA A.1.1-181 2018-08	Quantitative carrier test for the evaluation of the mycobactericidal activity of chemical disinfectants and antiseptics used for instruments in the medical area (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 16615 2015-06	Chemical disinfectants and antiseptics – quantitative test method for the evaluation of the bactericidal and yeasticidal activity on non-porous surfaces with mechanical action employing wipes in the medical area (4-field-test) - test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 12791 2016-06	Chemical disinfectants and antiseptics - surgical hand disinfection - test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)
VAH-methods 2015-04	Requirements and methods for VAH certification of chemical disinfection procedures - method 14: Surface disinfection
VAH-methods 2015-04	Requirements and methods for VAH certification of chemical disinfection procedures - method 15: Chemical/chemical-thermal instrument disinfection – practical quantitative carrier test
VAH-methods 2015-04	Requirements and methods for VAH certification of chemical disinfection procedures - method 16: Chemical-thermal textile disinfection – immersion method (practical test)
VAH-methods 2015-04	Requirements and methods for VAH certification of chemical disinfection procedures - method 17: Chemical-thermal textile disinfection – single bath method (practical test)
DIN EN 16616 2015-10	Chemical disinfectants and antiseptics – chemical-thermal textile disinfection – test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 13697 2015-06	Chemical disinfectants and antiseptics - quantitative non-porous surface test for evaluation of bactericidal and/or fungicidal activity of chemical disinfectants in food, industrial, domestic and institutional areas – test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)

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DIN EN 14349 2013-02	Chemical disinfectants and antiseptics - Quantitative surface test for evaluation of the bactericidal activity of chemical disinfectants and antiseptics for the veterinary sector on non-porous surfaces without mechanical action - test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 16437 2014-07	Chemical disinfectants and antiseptics - Quantitative surface test for evaluation of the bactericidal activity of chemical disinfectants and antiseptics for the veterinary sector on porous surfaces without mechanical action - test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 16438 2014-07	Chemical disinfectants and antiseptics - quantitative surface test for the evaluation of fungicidal or yeasticidal activity of chemical disinfectants and antiseptics used in the veterinary area on non-porous surfaces without mechanical action – test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 1499 2017-10	Chemical disinfectants and antiseptics - hygienic handwash - test method and requirements (phase 2, step 2); (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 1500 2017-10	Chemical disinfectants and antiseptics - hygienic handrub - test method and requirements (phase 2, step 2); (scope of application: <i>no testing and statements of conformity of medical products</i>)
AA HSA A.1.1-188 2018-08	Modified quantitative surface test for determination of the bactericidal / fungicidal long-term efficacy
DIN EN 14476 2015-12	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of virucidal activity for chemical disinfectants and antiseptics used in human medicine– test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 14675 2015-06	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the virucidal activity of chemical disinfectants and antiseptics for the veterinary sector - test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)

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DIN EN 13610 2003-06	Chemical disinfectants and antiseptics - quantitative suspension test for the evaluation of the virucidal activity against bacteriophages of chemical disinfectants and antiseptics in food and industrial areas - test method and requirements (phase 2, step 1) (scope of application: <i>no testing and statements of conformity of medical products</i>)
DIN EN 16777 2015-06	Chemical disinfectants and antiseptics - quantitative test on non-porous surfaces for evaluation of the virucidal activity in the medical area - test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)
AA HSA A.1.1-209 2018-08	Quantitative carrier test for evaluation of the virucidal activity for instruments in the medical area (scope of application: <i>no testing and statements of conformity of medical products</i>)
E DIN EN 17083 2017-03	Chemical disinfectants and antiseptics - quantitative surface test for the evaluation of virucidal activity of chemical disinfectants and antiseptics used in the veterinary area on non-porous surfaces without mechanical action – test method and requirements (phase 2, step 2) (scope of application: <i>no testing and statements of conformity of medical products</i>)
Guideline of DVV 2014-10	Suspension test for verification of the efficacy of disinfectants against viruses Guideline of the „Deutsche Vereinigung zur Bekämpfung der Viruskrankheiten (DVV) e.V.“ and the Robert Koch-Institute (RKI) for the testing of chemical disinfectants on efficacy against viruses in human medicine (scope of application: <i>no testing and statements of conformity of medical products</i>)

3 Determination of microorganisms (bacteria and fungi) via microbiological culture tests on plastics and other sealants **

DIN EN ISO 846 2019-08	Plastics - evaluation of the action of microorganisms
AA HSA A.1.1-169 2018-11	Determination of the growth and the effects of moulds on sealants

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AA HSA A.1.1-170 Practical film test (test with moulds)
2018-11

4 Investigations of Cosmetic products and their ingredients

4.1 Determination of microorganisms (bacteria and fungi) via microbiological culture tests for the determination of efficacy of antimicrobial preservation and of the germ content **

Ph. Eur. 5.1.3 Efficacy of antimicrobial preservation
2017-08

Ph. Eur. 2.6.12 Microbiological examination of non-sterile products: total viable aerobic count
2017-08

Ph. Eur. 2.6.13 Microbiological examination of non-sterile products: test for specified microorganisms
2017-08

Ph.Eur. 9.0/0008 Purified Water (Aqua purificata) as bulk
2017-08

AA HSA A.1.1-151 Preservation test in specific consumer goods
2016-12

5 Investigation of water (raw water, process water, industrial water, leakage water, cooling water and water from re cooler systems as well as of pipeline bound water dispensers)

5.1 Sampling

DIN EN ISO 19458 (K 19) Water quality; sampling for microbiological tests
2006-12

VDI 2047 sheet 2 Open re cooler systems
2015-01 Ensuring hygienically sound operation of evaporative cooling systems (VDI-cooling tower Code of practice)
(sampling of water from re cooler systems)
withdrawn standard

5.2 Physical, physico-chemical and chemical investigations

DIN EN ISO 10523 (C 5) Water quality – determination of pH-value
2012-04

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DIN EN 27888 (C 8) 1993-11	Water Quality – determination of electrical conductivity
DIN EN ISO 11885 (E 22) 2009-09	Water quality - determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) <i>(only iron and copper)</i>
DIN EN ISO 17294-2 (E 29) 2017-01	Water quality- application of inductively coupled plasma mass spectrometry (ICP-MS) - part 2: determination of 62 elements <i>(only cadmium, lead and nickel)</i>

5.3 Microbiological tests

DIN EN ISO 6222 (K 5) 1999-07	Water quality – Enumeration of culturable micro-organisms - Colony count by inoculation in a nutrient agar culture medium
DIN EN ISO 16266 (K 11) 2008-05	Water quality – detection and enumeration of <i>Pseudomonas aeruginosa</i> – method by membrane filtration
DIN EN ISO 9308-1 (K 12) 2017-09	Water quality – detection and enumeration of <i>Escherichia coli</i> und 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 14189 (K 24) 2016-11	Water quality - <i>Clostridium perfringens</i> (including spores) - method by membrane filtration
DIN EN ISO 11731 2018-03	Water quality – detection and enumeration of <i>Legionella</i> (deviation: matrix A and matrix B) <i>withdrawn standard</i>
TrinkwV § 15 (1c)	Determination of colony count

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6 Investigations of industrial water according to Regulation on evaporation coolers, cooling towers and wet scrubbers – §3 Section 8 42. BImSchV

Sampling

Procedure	Title
DIN EN ISO 19458 (K19) 2006-12	Water quality – sampling for microbiological analysis Recommendation of the Environmental Protection Agency for sampling of Legionella in evaporation coolers, cooling towers and wet scrubbers of 2017-06-02, Section C and D

Microbiological tests

Parameter	Procedure
Legionella	ISO 117311 2017-05 Recommendation of the Environmental Protection Agency for sampling of Legionella in evaporation coolers, cooling towers and wet scrubbers of 2017-06-02, Section E and F in consideration of annex 1 and 2
Colony count at 22 °C and 36 °C	DIN EN ISO 6222 (K5) 1999-07

7 Testing according to Drinking Water Regulation

Sampling

Method	Title
DIN ISO 5667-01 (A 4) 2007-04	Water quality - sampling - part 1: guidance on the design of sampling programs 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 tests
Recommendation of the Environmental Protection Agency December 18 th 2018	Assessing the quality of drinking water with regard to the parameters lead, copper and nickel

ATTACHMENT 1: MICROBIOLOGICAL PARAMETERS

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PART I: General requirements for drinking water

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

PART II: Requirements for drinking water designated for distribution in sealed containers

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

ATTACHMENT 2: CHEMICAL PARAMETERS

PART I: Chemical parameters with a concentration usually not increased in the distribution network including drinking water installations

not applicable

PART II: Chemical parameters with a concentration possibly increasing in the distribution network including drinking water installations

No.	Parameter	Method
1	antimony	not applicable
2	arsenic	not applicable
3	benzo-(a)-pyrene	not applicable
4	lead	DIN EN ISO 17294-2 (E 29) 2017-01
5	cadmium	DIN EN ISO 17294-2 (E 29) 2017-01
6	epiclorohydrin	Not applicable
7	copper	DIN EN ISO 17294-2 (E 29) 2017-01 DIN EN ISO 11885 (E 22) 2009-09
8	nickel	DIN EN ISO 17294-2 (E 29) 2017-01
9	nitrite	not applicable
10	polycyclic aromatic hydrocarbons	not applicable
11	trihalogen methanes	not applicable
12	vinyl chloride	not applicable

ATTACHMENT 3: INDICATOR PARAMETERS

Part I: General indicator parameters

No.	Parameter	Method
1	Aluminium	not applicable
2	Ammonium	not applicable
3	Chloride	not applicable

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No.	Parameter	Method
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
6	Iron	DIN EN ISO 11885 (E 22) 2009-09
7	Colour (spectral absorption coefficient Hg 436 nm)	not applicable
8	Odour (as clay)	not applicable
9	Taste	not applicable
10	Colony count at 22 °C	DIN EN ISO 6222 (K 5) 1999-07 TrinkwV §15 section (1c)
11	Colony count at 36 °C	DIN EN ISO 6222 (K 5) 1999-07 TrinkwV §15 section (1c)
12	Electrical conductivity	DIN EN ISO 27888 (C 8) 1993-11
13	Manganese	not applicable
14	Sodium	not applicable
15	Total organic carbon (TOC)	not applicable
16	Oxidizability	not applicable
17	Sulfate	not applicable
18	Turbidity	not applicable
19	Hydrogen ion concentration	DIN EN ISO 10523 (C 5) 2012-04
20	Calcite solubility	not applicable

PART II: Special requirements for drinking water in drinking water installation systems

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

ATTACHMENT 3a: requirements for drinking water with regard to radioactive substances

not applicable

The accreditation does not substitute the recognition and approval procedure of the competent authority according to § 15 section 4 TrinkwV.

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Abbreviations used:

DIN	Deutsches Institut für Normung e.V.
EN	European Norm
ISO	International Organization for Standardization
Ph. Eur.	Pharmacopoea Europaea (European Pharmacopoea)
UN	UN Recommendations on the Transport of Dangerous Good
VAH	Association for Applied Hygiene e.V.
VDI	Association of German Engineers
XX Q JJ XXX.XX	In-house standard test method in the field of chemistry
(S) XX Q JJ XXX.XX	In-house standard test method in the field of safety technology
AA HSA A.1.1-XXX	In-house standard test method in the field of microbiology

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