

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-14038-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 30.03.2020

Date of issue: 30.03.2020

Holder of certificate:

**Eurofins Institut Dr. Appelt Leipzig GmbH
Täubchenweg 28, 51 04317 Leipzig**

Tests in the fields:

**physical, physico-chemical, chemical, sensory, microbiological, molecular biological and immunological analysis of foodstuffs;
selected physico-chemical and microbiological analysis of feedstuffs;
physical, physico-chemical and microbiological analysis of fitment and utensils in food areas;
selected physical, physico-chemical and sensory analysis of water (drinking water, raw water and process water from production of food);
microbiological analysis in accordance with the German Drinking Water Ordinance, sampling of raw and drinking water;
sampling of foodstuffs, commodities**

Within the given testing fields, the testing laboratory is permitted, without being required and obtain prior approval from DAkkS, the following:

- *) the free choice of standard or equivalent testing methods.**
- ***) the modification, development and refinement of testing methods.**

The listed testing methods are exemplary.

The testing laboratory is permitted, without being required to inform DAkkS, to use standards or equivalent testing methods listed here with different issue dates.

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

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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1 Analysis of foodstuffs

1.1 Sampling

LEI-MA 321-03 Sampling of foodstuffs
2019-10

1.2 Sample preparation

LEI-SOP-00.42402.L Pressure digestion of foodstuffs as preparation for determination
2019-08 of sodium by flame AAS

1.3 Determination of the external quality/appearance, consistency, smell and taste by means of simple descriptive tests

ASU L 00.90-6 Analysis of foodstuffs - Sensory analysis - Simple descriptive test
2015-06 (adoption of standard of the same name DIN 10964,
November 2014 edition)
(Modification: *Scope of the test panel, requirements for test
room, sample encryption, packaging, details of test report*)

1.4 Determination of the external quality/appearance, consistency, smell and taste by means of evaluation scheme **

LEI-SOP-00.82001.L Sensory testing of baking mixes for bread
2019-08 (except dry flat bread) with evaluation scheme

LEI-SOP-00.82003.L Sensory testing of confectionery products with evaluation
2019-08 scheme

LEI-SOP-00.82004.L Sensory testing of sweets with evaluation scheme
2019-08

LEI-SOP-00.82005.L Sensory testing of cereal flakes with evaluation scheme
2019-08

LEI-SOP-00.82006.L Sensory testing of dry flat breads with evaluation scheme
2019-08

LEI-SOP-00.82012.L Sensory testing of cappuccino products with evaluation scheme
2019-08

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LEI-SOP-00.82013.L 2019-08	Sensory testing of oilseeds and oilseed preparations with evaluation scheme
LEI-SOP-00.82014.L 2019-08	Sensory testing of frozen vegetables, fruits and potato products with evaluation scheme
LEI-SOP-00.82015.L 2019-08	Sensory testing of bread and small baked products (before and after preparation) with evaluation scheme
LEI-SOP-00.82016.L 2019-08	Sensory testing of pastries (before and after preparation) with evaluation scheme
LEI-SOP-00.82017.L 2019-08	Sensory testing of combination bakery products (before and after preparation) with evaluation scheme
LEI-SOP-00.82018.L 2019-08	Sensory testing of baking mixes for pastries with evaluation scheme
LEI-SOP-00.82020.L 2019-08	Sensory testing of meat and meat products with evaluation scheme

1.5 Selected physical, physico-chemical and chemical analysis

DIN 10508 2019-03	Food hygiene - Temperatures for foodstuffs
ASU L 06.00-15 1982-11 Corrigendum 2002-12	Detection of condensed phosphates in meat and meat products <i>(Modification: Application to additional matrices: Fish, fish products, crustaceans and seafood, thaw water; extension of test mixture; optimisation of flow agents and spray reagents)</i>
ASU L 53.00-10 2010-09	Analysis of foodstuffs – Determination of essential oil content in spices, seasoning ingredients and herbs; steam distillation method (in accordance with DIN ISO 6571) <i>(Modification: Result expressed in terms of fresh weight (not dry matter))</i>
Nordic Committee on Food Analysis No. 168 2001	Water Activity - Instrumental Determination by Novasina Electronic Hygrometer and Aqua Lab Dew Point Instrument
LEI-SOP-00.77003.L 2019-08	Lipase activity in foodstuffs (colour reaction, qualitative)

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LEI-SOP-00.17800.L 2019-08	IR spectroscopic analysis of foreign bodies in foodstuffs and commodities
LEI-SOP-00.19502.L 2019-10	Determination of fill quantity of liquid foodstuffs (volumetric)
LEI-SOP-00.19530.L 2019-08	Determination of the number of foodstuffs
LEI-SOP-00.14500.L 2019-08	Determination of density in liquid foods by oscillating U-tube

1.6 Determination of characteristics, ingredients and additives by titrimetry **

ISO 760 1978-12	Determination of water; Karl Fischer method (General method) (Modification: Automation)
ASU L 00.00-46/1 1999-11	Analysis of foodstuffs – Determination of sulphite in foodstuffs – Part 1: Optimised Monier-Williams method (in accordance with DIN EN 1988 Part 1)
ASU L 01.00-10/1 2016-03	Analysis of foodstuffs – Determination of nitrogen content in milk and milk products – Part 1: Kjeldahl principle and crude protein calculation
ASU L 03.00-11 2007-12	Analysis of foodstuffs – Determination of the chloride content of cheese and processed cheese – Potentiometric method
ASU L 05.00-15 2007-12	Analysis of foodstuffs – Determination of crude protein content in eggs and egg products
ASU L 06.00-7 2014-08	Analysis of foodstuffs – Determination of raw protein content in meat and meat products –Kjeldahl titrimetric method – Reference method (Modification: <i>Extension to fish and fish products matrices</i>)
ASU L 07.00-5/1 2010-01	Analysis of foodstuffs – Determination of salt content (sodium chloride) in meat products – Potentiometric endpoint determination (Modification: <i>Application also to meat, fish and fish products</i>)
ASU L 10.00-3 1988-12	Analysis of foodstuffs – Determination of content of volatile nitrogenous bases (TVB-N) in fish and fish products; reference method

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ASU L 13.00-5 2012-01	Analysis of foodstuffs – Determination of acid number and acidity of animal and vegetable fats and oils (in accordance with DIN EN ISO 660)
ASU L 13.00-37 2012-01	Analysis of foodstuffs – Determination of peroxide number in animal and vegetable fats and oils – Iodometric (visual) endpoint determination
ASU L 13.05-4 1984-05	Analysis of foodstuffs – Determination of salt content in margarine (potentiometric method) (Modification: <i>Extension to butter and other fat spreads</i>)
ASU L 13.05-6 1985-05	Analysis of foodstuffs – Determination of total protein content in margarine (Modification: <i>Extension to butter; automation</i>)
ASU L 17.00-6 1988-12 Corrigendum 2009-06	Analysis of foodstuffs – Determination of chloride for the calculation of salt in bread, including small baked products made of bread dough (Modification: <i>Extension to pastries; pre-drying & blend tests omitted</i>)
ASU L 17.00-15 2013-08	Analysis of foodstuffs – Determination of raw protein content in bread including small baked products made of bread dough – Kjeldahl method (Modification: <i>Extension to pastries</i>)
ASU L 20.01/02-2 1980-05	Determination of total acidity in mayonnaise and emulsified sauces
ASU L 20.01/02-4 1980-05	Determination of salt content in mayonnaise and emulsified sauces (Modification: <i>Determination by potentiometric titration, automation</i>)
ASU L 26.04-1 1984-11	Analysis of foodstuffs – Determination of chloride in the cover brine and press liquor for the calculation of salt in sauerkraut (Modification: <i>Extension to juices and juice concentrates; chemicals; sample volume</i>)
ASU L 26.04-4 1987-06	Analysis of foodstuffs – Determination of titratable acids (total acidity) in the cover brine and press liquor for sauerkraut

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ASU L 26.11.03-2 1983-05 Corrigendum 2002-12	Determination of chloride content of tomato paste (potentiometric method)
ASU L 26.11.03-4 1983-05	Determination of total acidity of tomato purée (potentiometric method)
ASU L 26.11.03-11 1983-11 Corrigendum 2002-12	Determination of total nitrogen in tomato purée (Modification: <i>Automation</i>)
ASU L 52.06-3 1989-05 Corrigendum 2002-12	Analysis of foodstuffs – Determination of chloride for the calculation of salt in mustard (Modification: <i>Extension to spices, condiments, salt, vegetables and vegetable products; also with additional processing step</i>)
DGF C-V 11d (14) 2014	Wijs iodine value Cyclohexane/glacial acetic acid method
LEI-SOP-00.13000.L 2019-06	Determination of nitrogen content and crude protein content in foodstuffs by the Kjeldahl titrimetric method
LEI-SOP-00.44002.L 2019-08	Determination of total acidity in foodstuffs by potentiometry
LEI-SOP-00.44601.L 2019-08	Determination of sulphite in foodstuffs by the Zonneveld-Meyer method
LEI-SOP-26.44602.L 2014-10	Determination of sulphite in foodstuffs by the Reith-Willems method

1.7 Determination of characteristics and ingredients by gravimetry **

ASU L 00.00-18 1997-01 Corrigendum 2017-10	Analysis of foodstuffs – Determination of fibre in food
ASU L 01.00-20 2013-08	Analysis of foodstuffs – Determination of fat content of milk and milk products by the Weibull-Berntrop gravimetric method (Modification: <i>Automation, no blend tests</i>)

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ASU L 01.00-27 1988-12	Analysis of foodstuffs – Determination of the dry matter content of milk and cream; reference method (in accordance with DIN 10348) (Modification: <i>Extension to milk products; also additional use of sea sand, drying time</i>)
ASU L 01.00-77 2002-05	Analysis of foodstuffs – Determination of total ash in milk and milk products (in accordance with DIN 10477) (Modification: <i>Chemicals is omitted, temperature</i>)
ASU L 05.00-12 2012-01	Analysis of foodstuffs – Determination of dry matter in eggs and egg products
ASU L 06.00-3 2014-08	Analysis of foodstuffs – Determination of water content in meat and meat products – Gravimetric method – Reference method (Modification: <i>Extension to fish and fish products</i>)
ASU L 06.00-4 2017-10	Analysis of foodstuffs – Determination of ash in meat, meat products and sausages - Gravimetric method (reference method) (Modification: <i>Extension to fish and fish products</i>)
ASU L 06.00-6 2014-08	Analysis of foodstuffs – Determination of total fat content in meat and meat products – Weibull-Stoldt gravimetric method – Reference method (Modification: <i>Extension to fish and fish products</i>)
ASU L 13.05-1 1984-05	Analysis of foodstuffs – Determination of water content in margarine (Modification: <i>Extension to butter and other fat spreads; drying time</i>)
ASU L 13.05-3 2002-05	Analysis of foodstuffs – Determination of fat content in margarine and other fat spreads
ASU L 16.00-5 2017-10	Analysis of foodstuffs - Determination of total fat content in cereal products after acid digestion by extraction and gravimetry
ASU L 16.01-1 2008-12	Analysis of foodstuffs – Determination of moisture content in cereal flour (Modification: <i>Drying time</i>)
ASU L 16.01-2 2008-12	Analysis of foodstuffs – Determination of ash in cereal flour (Modification: <i>Sample weight</i>)

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ASU L 17.00-1 1982-05 Corrigendum 2002-12	Determination of loss on drying in bread including small baked products made of bread dough (Modification: <i>Extension to pastries; pre-drying omitted</i>)
ASU L 17.00-3 1982-05 Corrigendum 2002-12	Determination of ash in bread including small baked products made of bread dough (Modification: <i>Extension to pastries; pre-drying omitted</i>)
ASU L 20.01/02-3 1980-05	Determination of dry matter in mayonnaise and emulsified sauces (Modification: <i>Drying time</i>)
ASU L 20.01/02-5 1980-05	Determination of total fat content in mayonnaise and emulsified sauces (Modification: <i>Automation</i>)
ASU L 39.00-E (EG) and 1 (EG) to 10 (EG), method 1 1981-04	Analytical methods for determination of the composition of certain sugars intended for human consumption; Method 1: Determination of loss in mass by drying
ASU L 44.00-3 1985-12	Analysis of foodstuffs – Determination of dry matter content in solid chocolate (Modification: <i>Extension to cocoa and cocoa products, sweets; sample preparation</i>)
ASU L 44.00-4 1985-12	Analysis of foodstuffs – Determination of total fat content in chocolate (Modification: <i>Extension to cocoa and cocoa products, sweets; sample homogenisation; automation</i>)
ASU L 47.00-5 1985-12	Analysis of foodstuffs – Analysis of tea – determination of acid-insoluble ash (Modification: <i>Temperature; single determination</i>)
ASU L 52.06-2 1988-05	Analysis of foodstuffs – Determination of total fat content in mustard
ASU L 53.00-4 1996-02	Analysis of foodstuffs – Analysis of spices and seasoning ingredients – Determination of total ash and acid-insoluble ash (Modification: <i>Extension to vegetables and vegetable products</i>)
AOAC Offic. Meth. 938.10 1938	Solids (Alcohol-Insoluble) in Canned Peas - Gravimetric Method

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LEI-SOP-00.05707.L 2019-08	Determination of impurities in foodstuffs
LEI-SOP-00.11010.L 2019-08	Determination of water content and dry matter in foodstuffs by the gravimetric method
LEI-SOP-00.12000.L 2014-10	Determination of fat content in foodstuffs by the Weibull-Stoldt method
LEI-SOP-00.14000.L 2014-10	Determination of total ash and acid-insoluble ash in foodstuffs by the gravimetric method
LEI-SOP-00.19500.L 2014-09	Determination of the fill quantity of foodstuffs by the gravimetric method
LEI-SOP-00.19501.L 2019-10	Determination of proportions of foodstuffs by the gravimetric method
LEI-SOP-26.12008.L 2014-10	Determination of total fat content in vegetables, fruits and their products by Weibull-Stoldt
LEI-SOP-00.12015.L 2019-08	Determination of content of free fat in foodstuffs containing only free fats by Soxhlett
LEI-SOP-00.19508.L 2019-08	Determination of portion size of foodstuffs
LEI-SOP-00.19515.L 2019-08	Determination of proportions in nuts by ALDI-Süd specification

1.8 Determination of ingredients and additives by photometry *

ASU L 06.00-8 2017-10	Analysis of foodstuffs - Determination of hydroxyproline content in meat, meat products and sausages - Photometric method after acid digestion (reference method)
r-Biopharm 11 112 821 035 2011-07	UV test for determination of D-lactic acid and L-lactic acid in foodstuffs and other sample materials

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1.9 Determination of pH value by electrode measurement *

ASU L 02.09-6 2018-10	Analysis of foodstuffs – Determination of pH of caseins and caseinates; reference method (Modification: <i>Application also to cheese; sample preparation</i>)
ASU L 05.00-11 1995-01	Analysis of foodstuffs – Measurement of the pH value in eggs and egg products
ASU L 06.00-2 1980-09	Measurement of pH in meat and meat products (Modification: <i>Extension to fish and fish products</i>)
ASU L 20.01/02-1 1980-05	Measurement of pH in mayonnaise and emulsified sauces
ASU L 26.04-3 1987-06	Analysis of foodstuffs – Measurement of pH in the cover brine and press liquor for sauerkraut
ASU L 26.11.03-3 1983-05	Determination of pH of tomato purée
ASU L 31.00-2 1997-01	Analysis of foodstuffs – Determination of the pH value of fruit and vegetable juices (in accordance with DIN 1132)
AOAC Offic. Meth. 935.39 1935	Baked products H Hydrogen Ion Activity (pH)

1.10 Detection and determination of residues, mycotoxins, contaminants and ingredients by gas chromatography with conventional detectors (GC-FID, GC-ECD/FID, GC-FPD, GC double FID) **

ASU L 00.00-49/2 1999-11	Analysis of foodstuffs – Non-fatty foods – Determination of dithiocarbamate and thiuram disulfide residues – Part 2: Gas chromatographic method (Modification: <i>Use of methanol instead of acetone as solvent, reduced sample weight and solvent addition</i>)
ASU L 00.00-49/3 2001-07	Analysis of foodstuffs – Non-fatty foods – Determination of dithiocarbamate and thiuram disulfide residues – Part 3: UV spectrophotometric xanthate method (in accordance with DIN EN 12396 Part 3) (Modification: <i>Sample preparation, lower calibration range for organic products</i>)

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ASU L 17.00-12 1999-11 Corrigendum 2003-07	Analysis of foodstuffs – Determination of butyric acid as methyl ester in fat from bread including small baked products made of bread dough (Modification: <i>Extension to dairy products (butter, cream, cheese), standards, calibration</i>)
DGF C-VI 10a 2000	Gas chromatography: Analysis of fatty acids and fatty acid distribution
DGF C-VI 11e 2018	Fatty acid methyl ester (TMSH methods) (Modification: Application for <i>determination of omega-3 and omega-6 fatty acid content, other internal standard (C13:0); higher sample weight with adaptation of the derivatisation reagent</i>)
SLMB Nr. 501.2 2008	Determination of sugar in sugars, gas chromatography (Modification: <i>Extension to foodstuffs matrix; also determination of isomalt, internal standard D-salicin, extraction at 60 °C, silylation with BSTFA, different GC conditions; also determination of sugar alcohols (xylitol, lactitol, maltitol, mannitol, sorbitol)</i>)
LEI-SOP-00.66200.L 2017-11	Determination of authenticity of citrus oils by GC-FID

1.11 Detection and determination of residues, mycotoxins, contaminants and ingredients by gas chromatography with mass selective detectors (GC-MS-TOF, GC-MS/MS) *

ASU L 00.00-34 2010-09	Analysis of foodstuffs – Modular multiple analytical method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19) (Modification: <i>Modified E modules, automated GPC</i>)
ASU L 00.00-115 2018-10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean-up by dispersive SPE in plant-based foodstuffs – Modular QuEChERS method (Modification: <i>Skatole: Application also for non-pesticide skatole, extension to animal, high-fat foodstuffs, module E1 without addition of buffer-salt mixture, module C4 with higher PSA and C18 content, module C5 with higher PSA content; GC-MS/MS: E5 different water addition for dried fruits, C4 with different composition of sorption mixture; all methods: Filtration of final extract</i>)

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1.12 Detection and determination of residues, mycotoxins, contaminants and ingredients by liquid chromatography with conventional detectors (LC-FL, LC-RI, LC-UV/VIS, LC-DAD) **

ASU L 00.00-9 1984-11	Analysis of foodstuffs – Determination of preservatives in low-fat foodstuffs
ASU L 00.00-28 2001-07	Analysis of foodstuffs – Determination of acesulfame-K, aspartame and saccharin sodium in foodstuffs – HPLC method (in accordance with DIN EN 12856) (Modification: <i>Saccharin not in foodstuffs containing CO₂</i>)
ASU L 00.00-29 2001-07 Corrigendum 2006-12	Analysis of foodstuffs – Determination of sodium cyclamate in foodstuffs – HPLC method (in accordance with DIN EN 12857)
ASU L 15.00-2 2014-02	Analysis of foodstuffs – Determination of aflatoxin B1 and the sum of aflatoxin B1, B2, G1 and G2 in cereals, nuts and related products – High performance liquid chromatography method
ASU L 17.00-14 1987-06 Corrigendum 2002-12	Analysis of foodstuffs – Determination of propionic acid in bread (Modification: <i>Extension to bakery products, content of propionic acid expressed in mg/kg; chemicals; different injection volume</i>)
ASU L 26.00-1 2018-10	Analysis of foodstuffs – Determination of the nitrate content in vegetable products – HPLC/IC method (Modification: <i>Matrix extension to fruit bars</i>)
ASU L 30.00-5 2011-01	Analysis of foodstuffs – Determination of ochratoxin A in currants, raisins, sultanas, mixed dried fruits and dried figs – HPLC method with immunoaffinity column clean-up
ASU L 45.00-1 1999-11	Analysis of foodstuffs – Determination of theobromine and caffeine in cocoa
ASU L 46.00-3 2013-08	Analysis of foodstuffs – Analysis of coffee and coffee products; determination of caffeine content by HPLC; reference method (in accordance with DIN ISO 20481) (Modification: <i>Mobile Phase</i>)
ASU L 46.02-5 2010-01	Analysis of foodstuffs – Determination of ochratoxin A in roasted coffee – HPLC method with immunoaffinity column clean-up
SLMB 738.1 2000-07	Determination of caffeine in soft drinks

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LEI-SOP-00.15601.L 2019-08	Determination of glucose, fructose, sucrose, lactose and maltose in foodstuffs by HPLC-RI
LEI-SOP-00.33000.L 2019-08	Determination of glycerol in foodstuffs by HPLC-RI
LEI-SOP-00.61001.L 2019-12	Determination of aflatoxin B1 and the sum of aflatoxin B1, B2, G1 and G2 in spices, bakery products and related products by HPLC method
LEI-SOP-00.61203.L 2019-12	Determination of ochratoxin A in spices, oilseeds, bakery products and related products by HPLC method
LEI-SOP-00.74001.L 2019-08	Determination of vanillin, p-hydroxybenzaldehyde, vanillic acid, p-hydroxybenzoic acid and ethylvanillin in foodstuffs by HPLC

1.13 Detection and determination of residues, mycotoxins, contaminants and ingredients by liquid chromatography with mass selective detectors (LC-MS/MS) **

ASU L 00.00-34 2010-09	Analysis of foodstuffs – Modular multiple analytical method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19) (Modification: <i>Modified E modules, automated GPC</i>)
ASU L 00.00-76 2008-12	Analysis of foodstuffs – Determination of chlormequat and mepiquat in low-fat foods – LC-MS/MS method (Modification: <i>Application also for parameter diquat; modified calibration and sample preparation</i>)
ASU L 00.00-115 2018-10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean-up by dispersive SPE in plant-based foodstuffs – Modular QuEChERS method (Modification: <i>QAV: Extension to QAV; organotin compounds and dithianone: Extraction with acid acetonitrile, QuEChERS extraction salts without citrate; all methods: E5 - different water addition for dried fruits, filtration of final extract</i>)
LEI-SOP-00.65030.L 2019-08	Determination of fosetyl-Al and phosphonic acid in plant-based foodstuffs and products by LC-MS/MS
LEI-SOP-00.69532.L 2019-08	Determination of maleic hydrazide in plant-based foodstuffs by LC-MS / MS

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LEI-SOP-01.69500.L 2019-08	Determination of maleic hydrazide in milk by LC-MS/MS
LEI-SOP-00.61300.L 2019-03	Determination of fumonisin B1, B2 and B3 in cereals and cereal products by LC-MS/MS
LEI-SOP-00.61701.L 2019-08	Determination of various mycotoxins in foodstuffs by LC-MS/MS (multi-method)
LEI-SOP-00.61900.L 2019-08	Determination of anisatin in star anise by LC-MS/MS
SOP-PA-00.65104.L 2013-02	Determination of glyphosate, AMPA and glufosinate in plant-based foodstuffs by LC-MS/MS
LEI-SOP-00.66103.L 2019-08	Determination of ethephon in plant-based foodstuffs by LC-MS/MS
LEI-SOP-00.78001.L 2019-08	Determination of perchlorate and chlorate in foodstuffs by LC-MS/MS

1.14 Atomic absorption spectrometry (AAS)

LEI-SOP-00.42401.L 2019-08	Determination of sodium in foodstuffs by AAS
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1.15 Determination of radioactivity of foodstuffs

Fa. Berthold Technologies GmbH 1987	Manufacturer's instructions for determination of radioactivity in foodstuffs by Becquerel Monitor
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1.16 Detection of bacteria and genetically modified organisms (GMOs) in foodstuffs by real-time PCR *

BACGene Salmonella spp. Eurofins GeneScan Cat. no. 5123221801 2015-07	Test kit for qualitative real-time PCR detection of Salmonella spp. (Modification: <i>Additional enrichment step for chocolate and spices matrix, different sample weight quantities, no application to walnuts</i>)
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BACGene Listeria Monocytogenes Cat. No. 5123222001 2017-04	Test kit for qualitative real - time PCR detection of Listeria monocytogenes
GMOScreen RT 35/NOS/ABI IPC (LR) for ABI 7500 Eurofins GeneScan Cat. No. 5421227101 2017-02	Test kit for qualitative RT-PCR detection of the p35S, tNOS and AgroBorder II on Applied Biosystems® 7500/Fast

1.17 Determination of selected components by ELISA

1.17.1 Determination of allergens in foodstuffs by ELISA *

RIDASCREEN®FAST Peanut R6202 2018-06	Enzyme immunoassay for quantitative determination of peanut
RIDASCREEN®FAST Soya R7102 2016-07	Enzyme immunoassay for quantitative determination of soy proteins
RIDASCREEN®FAST Hazelnut R6802 2018-01	Enzyme immunoassay for quantitative determination of hazelnut (Modification: <i>Also single determination</i>)
Veratox® for Total Milk Allergen 8470 2008-08	Enzyme immunoassay for quantitative determination of total milk
Veratox® for Histamine 9505 2018	Enzyme immunoassay for quantitative determination of histamine
Veratox® for Egg Allergen 8450 2008-08	Enzyme immunoassay for quantitative determination of chicken egg
RIDASCREEN®FAST Mandel/Almond R6901 2019-04	Enzyme immunoassay for quantitative determination of almond

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RIDASCREEN® Gliadin R7001 2015-10	Enzyme immunoassay for quantitative determination of gliadins and related prolamins
RIDASCREEN® FAST Lupine R6102 2016-07	Enzyme immunoassay for quantitative determination of lupine proteins

1.17.2 Determination of mycotoxins by ELISA

RIDASCREEN® Aflatoxin M ₁ R1121 2018-10	Enzyme immunoassay for quantitative determination of aflatoxin M ₁
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1.18 Detection and determination of bacteria, yeasts and moulds using cultural microbiological methods **

ISO 4831 2006-08	Horizontal method for the detection and enumeration of coliforms - Most probable number technique
ISO 4832 2006-02	Horizontal method for the enumeration of coliforms – Colony-count technique (Modification: <i>Also single analysis, also spiral plater method</i>)
ASU L 00.00-20 2018-03	Analysis of foodstuffs – Horizontal method for the detection, enumeration and serotyping of Salmonella – Part 1: Detection of Salmonella spp. (Modification: <i>2. Enrichment only with MKTTn broth, confirmation also by PCR, with the exception of Annex D</i>)
ASU L 00.00-22 2018-03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. -- Part 2: Counting methods (Modification: <i>Confirmation also by PCR</i>)
ASU L 00.00-32/1 2018-03 Corrigendum 2018-06	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. -- Part 1: Detection method (Modification: <i>Confirmation also by PCR</i>)

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ASU L 00.00-33 2006-12	Analysis of foodstuffs – Horizontal method for the enumeration of presumptive <i>Bacillus cereus</i> in foodstuffs; colony-count technique at 30 degrees C (Modification: <i>also single analysis, also spiral plater method, also use of BACARA agar</i>)
ASU L 00.00-55 2004-12	Analysis of foodstuffs – Method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) in foodstuffs; Part 1: Technique using Baird-Parker agar medium (Modification: <i>Also single analysis, confirmation also latex agglutination test</i>)
ASU L 00.00-57 2006-12	Analysis of foodstuffs – Method for the enumeration of <i>Clostridium perfringens</i> in foodstuffs; colony-count technique (Modification: <i>also single analysis, also TSC agar and therefore confirmation by fluorescence</i>)
ASU L 00.00-88/1 2015-06	Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 degrees C by the pour plate technique (Modification: <i>also single analysis</i>)
ASU L 00.00-88/2 2015-06	Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 degrees C by the surface plating technique (Modification: <i>also single analysis</i>)
ASU L 00.00-100 2006-12	Analysis of foodstuffs – Horizontal method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) in foodstuffs; detection and MPN method for low bacterial counts (Modification: <i>Confirmation of latex agglutination test</i>)
ASU L 00.00-132/2 2010-09	Analysis of foodstuffs – Horizontal method for the enumeration of β -glucuronidase-positive <i>Escherichia coli</i> in foodstuffs – Part 2: Colony-count technique using 5-bromo-4-chloro-3-indolyl β -D-glucuronic acid (Modification: <i>Single analysis; also spatula and spiral plater methods</i>)
ASU L 00.00-133/1 2018-03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 1: Detection of Enterobacteriaceae (Modification: <i>Different dilutions for spices</i>)

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<p>ASU L 00.00-133/2 2018-03</p>	<p>Analysis of foodstuffs – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 2: Colony-count technique (Modification: <i>Also single analysis, also surface plating technique, confirmation with OF-glucose medium omitted</i>)</p>
<p>ASU L 01.00-25 1997-09 Corrigendum 2002-12</p>	<p>Analysis of foodstuffs – Determination of Escherichia coli in milk, milk products, butter, cheese and ice cream; method with liquid culture medium (Modification: <i>Extension to nuts, sweets, chocolate, spices, flavours, cereals and cereal flour products</i>)</p>
<p>ASU L 01.00-37 1991-12</p>	<p>Analysis of foodstuffs – Determination of the number of yeasts and moulds in milk and milk products (reference method) (Modification: <i>Extension to foodstuffs in general, also single analysis, also surface plating technique, incubation 3-5 days</i>)</p>
<p>ASU L 06.00-32 2018-10</p>	<p>Analysis of foodstuffs – Determination of Enterococcus faecalis and Enterococcus faecium in meat and meat products; spatula method (reference method) (Modification: <i>Extension to foodstuffs, also single analysis, also spiral plater method, use of Slanetz and Bartley agar</i>)</p>
<p>ASU L 06.00-39 1994-05</p>	<p>Analysis of foodstuffs – Determination of mesophilic sulphite-reducing clostridia in meat and meat products – Pour plate method (reference method) (Modification: <i>Extension to ready meals, spices, condiments, dry soups, cereal products, also single analysis, also spiral plater method</i>)</p>
<p>ASU L 06.00-43 2011-06</p>	<p>Analysis of foodstuffs – Enumeration of Pseudomonas spp. in meat and meat products (Modification: <i>Extension to fish and fish products, milk and milk products, vegetables and ready meals, also single determination, also spiral plater method</i>)</p>
<p>BIOMÉRIEUX TEMPO® LAB 2008-07</p>	<p>Automated test for colony count of lactic acid bacteria from foodstuffs in 40-48 h</p>
<p>BIOMÉRIEUX TEMPO® EB 2014-07</p>	<p>Automated test for colony count of Enterobacteriaceae from foods in 22-27 h</p>

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BIOMÉRIEUX TEMPO® AC 2014-01	Automated test for colony count of viable, aerobic, mesophilic germ flora in foodstuffs (Modification: <i>No application to the matrices flour, cocoa, spices and fatty foods</i>)
BIOMÉRIEUX TEMPO® EC 2015-01	Automated test for colony count of Escherichia coli from foodstuffs in 22-27 h
BIOMÉRIEUX TEMPO® STA 2015-01	Automated test for colony count of coagulase-positive staphylococci (<i>Staphylococcus aureus</i>) from foodstuffs in 24-27 h
BIOMÉRIEUX TEMPO® BC Ref. 80106; 9302582B 2014-04	Automated test for colony count of the <i>Bacillus cereus</i> group in foodstuffs in 22-27 h
IOCCC 39 1990-02	Microbiological examination of chocolate and other products – Determination of aerobic, mesophilic bacterial count at 30 degrees C in foodstuffs (Modification: <i>Also single analysis, also spiral plater method</i>)
SOP-AA-M-00.942 2004-05	Determination of anaerobic spores and spore formers in foodstuffs
SOP-AA-M-00.983 2001-12	Determination of aerobic, thermophilic spores
LEI-SOP-00.98502.M 2019-08	Determination of aerobic, mesophilic spore formers and aerobic, mesophilic spores in foodstuffs and feedstuffs
SOP-PA-00.95600.M 2011-03	Detection and determination of osmotolerant yeasts in foodstuffs
SOP-PA-00.95610.M 2010-11	Determination of osmotolerant moulds in foodstuffs
SOP-PA-00.98507.M 2011-07	Determination of spore count of gas-forming anaerobes in foodstuffs by MPN method

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2 Analysis of feedstuffs

2.1 Determination of mycotoxins by liquid chromatography with Conventional detectors (LC-FL) *

ASU L 15.00-1/1 1999-11	Analysis of foodstuffs – Determination of ochratoxin A in cereals and cereal products; Part 1: High performance liquid chromatography method with silica gel purification (adoption of standard of the same name DIN EN ISO 15141 Part 1, December 1998) (Modification: <i>Extension to feedstuffs, standards, chemicals, equipment, implementation</i>)
ASU L 15.00-2 2014-02	Analysis of foodstuffs – Determination of aflatoxin B1 and the sum of aflatoxin B1, B2, G1 and G2 in cereals, nuts and related products – High performance liquid chromatography method (Modification: <i>Extension to feedstuffs, chemicals, equipment</i>)

2.2 Determination of residues and mycotoxins by liquid chromatography with mass selective detectors (LC-MS/MS) in certain feedstuffs such as vegetables/vegetable waste, cereals/cereal products and their waste, oils/oilseeds and fatty feedstuffs **

ASU L 00.00-76 2008-12	Analysis of foodstuffs – Determination of chlormequat and mepiquat in low-fat foods – LC-MS/MS method (Modification: <i>Application also to feedstuffs matrix and for the parameter diquat; modified calibration and sample preparation</i>)
ASU L 00.00-115 2018-10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean-up by dispersive SPE in plant-based feedstuffs – Modular QuEChERS method (Modification: <i>Application to feedstuffs matrix, filtration of final extract</i>)
LEI-SOP-90.61700.P 2019-08	Determination of various mycotoxins in feedstuffs by LC-MS/MS (multi-method)
LEI-SOP-90.65100.L 2017-02	Determination of glyphosate in plant-based feedstuffs by LC-MS/MS

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2.3 Determination of residues by gas chromatography with mass-selective detectors (GC-MS TOF, GC-MS/MS) in certain feedstuffs such as vegetables/vegetable waste, cereals/cereal products and their waste, oils/oilseeds and fatty feedstuffs *

ASU L 00.00-34 2010-09	Analysis of foodstuffs - Modular multi-method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19) (Modification: <i>Application to feedstuffs matrix, Modified E modules, automated GPC</i>)
ASU L 00.00-115 2018-10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean-up by dispersive SPE in plant-based foodstuffs – Modular QuEChERS method (Modification: <i>Application to feedstuffs matrix, E5 - different water addition for dried fruits, C4 with different composition of sorption mixture, filtration of final extract</i>)

2.4 Determination of bacteria, yeasts and moulds using cultural microbiological methods **

ISO 4832 2006-02	Microbiology – Horizontal method for the enumeration of coliforms – Colony-count technique (Modification: <i>Also single analysis, also spiral plater method</i>)
ASU L 00.00-55 2004-12	Analysis of foodstuffs – Method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) in foodstuffs; Part 1: Technique using Baird-Parker agar medium (Modification: <i>Also single analysis, confirmation also latex agglutination test</i>)
ASU L 00.00-88/1 2015-06	Analysis of foodstuffs – Horizontal method for the enumeration of microorganisms – Colony-count technique – Part 1: Colony count at 30 degrees C by the pour plate technique (in accordance with DIN EN ISO 4833-1) (Modification: <i>Also single analysis</i>)
ASU L 00.00-88/2 2015-06	Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 degrees C by the surface plating technique (Modification: <i>also single analysis</i>)

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ASU L 00.00-132/2 2010-09	Analysis of foodstuffs – Horizontal method for the enumeration of β -glucuronidase-positive <i>Escherichia coli</i> in foodstuffs – Part 2: Colony-count technique using 5-bromo-4-chloro-3-indolyl β -D-glucuronic acid (Modification: <i>Single analysis, also spatula and spiral plater methods</i>)
ASU L 00.00-133/1 2018-03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 1: Detection of Enterobacteriaceae
ASU L 00.00-133/2 2018-03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 2: Colony-count technique (Modification: <i>Also single analysis, also surface plating technique, confirmation with OF-glucose medium omitted</i>)
ASU L 01.00-37 1991-12	Analysis of foodstuffs – Determination of the number of yeasts and moulds in milk and milk products (reference method) (Modification: <i>Extension to feedstuffs, also single analysis, also surface plating technique, incubation 3-5 days</i>)
ASU L 06.00-32 1992-06	Analysis of foodstuffs – Determination of <i>Enterococcus faecalis</i> and <i>Enterococcus faecium</i> in meat and meat products; spatula method (reference method) (in accordance with DIN 10106) (Modification: <i>Extension to feedstuffs, also single analysis, also spiral plater method</i>)

2.5 Chemical-physical analysis

Nordic Committee on Food Analysis No. 168 2001	Water Activity - Instrumental Determination by Novasina Electronic Hygrometer and Aqua Lab Dew Point Instrument (Modification: <i>Extension to feedstuffs</i>)
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3 Analysis of fitment and utensils in food areas

3.1 Sampling

ASU B 80.00-5 2019-02	Analysis of commodity goods – Microbiology of the food chain – Horizontal method for surface sampling
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LEI-MA-507-005 2017-09	Sampling swabs, contact clips and plates, destructive sampling (punching samples) and non-destructive sampling (scraping sponges)
TRBA 405 2006-07	Application of measurement procedures and technical control values for airborne biological agents

3.2 Determination of bacteria, yeasts and moulds using cultural microbiological methods **

ASU B 80.00-5 2019-02	Analysis of commodity goods – Microbiology of the food chain – Horizontal method for surface sampling
TRBA 405 2006-07	Application of measurement procedures and technical control values for airborne biological agents
LEI-SOP-92.98700.M 2019-08	Determination of total number of germs capable of reproduction in air using sedimentation plates
SOP-PA-92.91043.M 2010-05	Inspection of personal hygiene using a combined swab and direct contact method

3.3 Physical and physico-chemical analysis

LEI-SOP-80.05920.B 2019-08	Determination of halogens in organic compounds by Beilstein sample
LEI-SOP-00.17800.L 2019-08	IR spectroscopic analysis of foreign bodies in foodstuffs and commodities
LEI-SOP-80.17801.B 2019-08	Determination of identity of plastics by IR spectroscopy
LEI-SOP-80.29800.B 2019-08	Determination of oxygen and carbon dioxide content in packaging by infrared absorption

-Translation-

4 Test methods in accordance with the German Drinking Water Regulation - 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) 2019-07	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 drinking water quality with respect to the parameters lead, copper and nickel

ANNEX 1: MICROBIOLOGICAL PARAMETERS

PART I: General requirements for drinking water

Seq. no.	parameters	Method
1	Escherichia coli (E. coli)	DIN EN ISO 9308-1 (K 12) 2017-09
2	Enterococci	DIN EN ISO 7899-2 (K 15) 2000-11

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

Seq. no.	parameters	Method
1	Escherichia coli (E. coli)	DIN EN ISO 9308-1 (K 12) 2017-09
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

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ANNEX 3: INDICATOR PARAMETERS

Part I: General indicator parameters

Seq. no.	parameters	Method
1	Aluminium	Not used
2	Ammonia	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
6	Iron	Not used
7	Colouring (spectral absorption coefficient Hg 436 nm)	Not used
8	Odour	DIN EN 1622 (B 3) 2006-10 (Annex C)
9	Taste	DEV B 1/2 Teil 2 1971
10	Colony count at 22 °C	DIN EN ISO 6222 (K 5) 1999-07
11	Colony count at 36 °C	DIN EN ISO 6222 (K 5) 1999-07
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

parameters	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

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.

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5 Analysis of water (drinking water, raw water and process water from production of food)

5.1 Sampling

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) 2019-07	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 (UBA) 2018-12	Systemic analysis of drinking water installations for legionella in accordance with the German Drinking Water Ordinance – Sampling, examination and indication of the result
Recommendation of the Federal Environment Agency (UBA) 2018-12	Assessment of the quality of drinking water with respect to the parameters lead, copper and nickel

5.2 Sensory analysis

DEV B 1/2 1971-06	Test for odour and flavour
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5.3 Physical and physico-chemical analysis

DIN 38404-C 4 1976-12	Determination of temperature
DIN EN ISO 10523 (C 5) 2012-04	Water quality – Determination of pH
DIN EN 27888 (C 8) 1993-11	Water quality – Determination of electrical conductivity
LEI-SOP-59.78001.L 2019-08	Determination of perchlorate and chlorate in water by LC-MS/MS

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Hach Lange GmbH	Determination of chlorine, free
Chlorine, free	(measuring range 0.02 – 2.00 mg/l Cl ₂)
2105569	
2017-07	

Abbreviations used:

AOAC	Association of Official Analytical Chemists
ASU	Amtliche Sammlung von Untersuchungsverfahren (Official Collection of Test Methods) on the basis of Section 64
	Lebensmittel- und Bedarfsgegenstände-Gesetz (German Food and Feed Act)
BIA	Berufsgenossenschaftliches Institut für Arbeitsschutz (German Institute for Occupational Safety and Health)
CVUA	Chemical and Veterinary Investigation Office
DEV	Deutsche Einheitsverfahren (German standard methods)
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation)
DGF	Deutsche Gesellschaft für Fett (German Society for Fat Science)
DIN	Deutsches Institut für Normung e. V. (German Institute for Standardization)
DNA	Deoxyribonucleic acid
EN	European standard
ISO	International Organization for Standardization
Ph. Eur.	Pharmacopoeia Europaea
SLMB	Schweizer Lebensmittelbuch (Swiss Food Code)
SOP-PA-xx.xxxxx.x/	In-house method of Eurofins Institut Dr. Appelt Leipzig GmbH
SOP-AA-x-xxxxx/	
LEI-MA-xxx-xxx/	
LEI-SOP-xx.xxxxx.x/	
TRBA	Technische Regeln für Biologische Arbeitsstoffe (Technical Rules for Biological Agents)
TrinkwV	German Drinking Water Ordinance
UBA	Umweltbundesamt (Federal Environment Agency)
VDI	Verein deutscher Ingenieure (Association of German Engineers)
Regulation (EEC)	Regulation of the European Economic Community
Regulation (EC)	Regulation of the European Union

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