Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-11020-04-01 according to DIN EN ISO/IEC 17025:2018

Valid from: 15.05.2020

Date of issue: 15.05.2020

Holder of certificate:

SGS Germany GmbH

at the locations

Rödingsmarkt 16, 20459 Hamburg
Weidenbaumsweg 137, 21035 Hamburg
Europa-Allee 12, 49685 Emstek

Tests in the fields:

physico-chemical, chemical, sensory, microscopic, microbiological and molecular biological analysis of foodstuffs, food supplements, commodities, feeding stuffs and fertilisers, packaging materials and cosmetics
sensory analysis of tobacco products
analysis of the effectiveness of disinfectants
microbiological analysis in accordance with the German Drinking Water Ordinance, sampling of drinking water for microbiological analysis
sampling and microbiological analysis of production water in the foodstuffs and cosmetics sector

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

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.

For the test fields marked with * or **, the testing laboratory is permitted to do the following without obtaining prior notification and consent from DAkkS GmbH

***** **Freely select standard test methods or equivalent test methods.**

****** **Modify test methods and develop new test methods.**

The test methods listed are given by way of example. The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation.

Analysis is carried out at the location Weidenbaumsweg 137, 21035 Hamburg and Customer Service is based at the locations Rödingsmarkt 16, 20459 Hamburg and Europa-Allee 12, 49685 Emstek.

1 Physico-chemical and chemical analysis in various matrices

1.1 Sample digestion

SOP M 1473 2015-04	Sample digestion of foodstuffs and feedstuffs by microwave digestion unit, turboWAVE and UltraCLAVE IV

1.2 Determination of elements by atomic absorption, emission and mass spectrometry (ICP-OES, ICP-MS, HPLC-ICP-MS and AAS) in foodstuffs (including food supplements), feedstuffs and fertilisers as well as environmental samples

1.2.1 Determination of elements in feedstuffs by ICP-OES

DIN EN 15621 2017-10	Animal feeding stuffs - Methods of sampling and analysis - Determination of calcium, sodium, phosphorus, magnesium, potassium, sulphur, iron, zinc, copper, manganese and cobalt after pressure digestion by ICP-AES (Modification: *No freeze-drying but higher sample weight. Also use for the measurement of foodstuffs and fertilisers*)

1.2.2 Determination of elements in foodstuffs (including food supplements) by ICP-MS *

DIN EN 15763 2010-04	Foodstuffs - Determination of trace elements - Determination of arsenic, cadmium, mercury and lead in foodstuffs by inductively coupled plasma mass spectrometry (ICP-MS) after pressure digestion (Modification: *Measurement of other elements Cu, Mn, Mo, Ni, V, Se, Al, Tl, Cr, Fe, Zn, Ba, B*)

-Translation-

DIN EN 15765 2010-04	Foodstuffs - Determination of trace elements - Determination of tin by inductively coupled plasma mass spectrometry (ICP-MS) after pressure digestion
DIN EN 16802 2016-07	Foodstuffs - Determination of elements and their chemical species - Determination of inorganic arsenic in foodstuffs of marine and plant origin by anion-exchange HPLC-ICP-MS

1.2.3 Determination of mercury in environmental samples by AAS

SOP M 2567 2017-12	Determination of mercury in environmental samples by direct analysis of solids at the Hamburg-Bergedorf location

1.3 Determination of organic contaminants, ingredients and additives in foodstuffs, feedstuffs, commodities and cosmetics by gas chromatography (GC)

1.3.1 Determination of organic contaminants, ingredients and additives in foodstuffs, feedstuffs, commodities and cosmetics by gas chromatography with mass selective detection (GC/MS) **

SOP M 1299 2019-09	Determination of volatile chlorinated hydrocarbons and BTXE in foodstuffs and commodities by HS-GC/MS
SOP M 2167 2010-07	Determination of 3-monochloropropane-1,2-diol (3-MCPD) derivatives and the sum of 3-MCPD & 2,3-epoxy-1-propanol (glycidyl) derivatives in oil and fat containing foods by gas chromatography/mass spectrometry (GC/MS) and mathematical determination of the glycidol content (differential method)
SOP M 2168 2010-07	Determination of monochloropropanediol (MCPD) & 2,3-epoxy-propan-1-ol (glycidyl) derivatives in oil and fat containing foods by gas chromatography/mass spectrometry (GC/MS) (direct method)
SOP M 2864 2015-07	Determination of cholesterol in foodstuffs and feedstuffs by GC/MS
SOP M 2920 2018-11	Determination of polycyclic aromatic hydrocarbons (PAHs) in fat containing foods using automated sample preparation (MPS)
SOP M 3053 2018-11	Determination of plasticisers in oils and fats by LC-GC-MS/MS

SOP M 3120 2015-01	Determination of hexane in foodstuffs and feedstuffs by headspace GC-MS
SOP M 3121 2015-05	Determination of C_3-chlorhydrins (isomeric dichloropropanols (DCP) and chlorpropanediols (MCPD)) in foodstuffs, feedstuffs, commodities and cosmetics by GC-MS

1.3.2 Determination of ingredients in foodstuffs and feedstuffs by gas chromatography with flame ionisation detection (GC/FID)

SOP M 3315 2017-07	Determination of the fatty acid profile and butyric acid in animal and vegetable fats and oils by GC/FID

1.4 Determination of organic contaminants, ingredients and additives in foodstuffs, feedstuffs and digestates by liquid chromatography with conventional detectors (HPLC-RI, -FLD, -IC) **

SOP M 1267 2008-01	Determination of aflatoxin M1 in foodstuffs and feedstuffs by HPLC
SOP M 2569 2013-02	Quantitative analysis of fructose, glucose, sucrose, maltose and lactose in foodstuffs by HPLC-RID
SOP M 1276 2015-04	HPLC determination of organic acids in fermentation substrates by HPLC-IC

1.5 Determination of organic contaminants, plant protection product residues, ingredients and additives in foodstuffs and feedstuffs by liquid chromatography with mass selective detection (LC/MS-MS) **

SOP M 1269 2013-11	Determination of patulin in foodstuffs by LC-MS/MS
SOP M 1273 2016-06	Determination of hydroxymethylfurfural in juices, fruit purées and honey by LC/MS-MS
SOP M 1274 2016-10	Determination of pyrrolizidine alkaloids and tropane alkaloids in honey, teas and herbs by LC/MS-MS
SOP M 1285 2009-03	Determination of fusarium toxins and ochratoxin A in cereals and cereal products by LC/MS-MS

SOP M 1386 2013-09	Determination of aflatoxins B1, B2, G1, G2 and ochratoxin A in foodstuffs and feedstuffs by LC/MS-MS
SOP M 1601 2015-05	Determination of mycotoxins and pesticides in cereals by LC/MS-MS
SOP M 2021 2011-03	Determination of the fusarium toxins DON, ZEA, HT2 and T2 in non-cereal matrices by LC/MS-MS
SOP M 2087 2018-06	Determination of aflatoxins B1, B2, G1, G2 and ochratoxin A in foodstuffs and feedstuffs by immunoaffinity column purification for German Dietary Ordinance determination limits and LC/MS-MS detection
SOP M 2919 2018-10	Determination of the fumonisins B1, B2 and B3 in foodstuffs and feedstuffs, without immuno-purification, by LC/MS-MS detection
SOP M 3054 2017-07	Determination of paraquat and diquat in fat, oil and oilseeds by LC/MS-MS

1.6 Determination of phosphates in foodstuffs by thin layer chromatography

ASU L 06.00-15 1982-11	Detection of condensed phosphates in meat and meat products

1.7 Photometric and enzymatic determination of starch, inulin, fat indicators, additives, preservatives, ingredients and quality-determining characteristics in foodstuffs (including food supplements) and feedstuffs

1.7.1 Photometric determination of fat indicators, additives, preservatives, ingredients and quality-determining characteristics in fats and oils, sugars, meat and sausage products, cocoa products and feedstuffs *

ISO 3656 2011-01	Animal and vegetable fats and oils - Determination of ultraviolet absorbance expressed as specific UV extinction (ASU L 13.00-25)
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) (Modification: *Standard approach and dilution, no boiling at reflux condenser, but digestion in drying oven*)

-Translation-

ASU L 06.00-9 2008-06 including Corrigendum 2009-06	Analysis of foodstuffs - Determination of total phosphorus content in meat and meat products - Photometric method
ASU L 07.00-57 2008-06	Analysis of foodstuffs - Determination of collagen degradation products in meat products
ASU L 39.01.02- 3 (EG) 1981-04	Test methods for determining the quality of white sugar - Colour in solution (white sugar)
AOCS Official Method Cc 13i-96 7th Edition 2017	Determination of Chlorophyll Pigments in Crude Vegetable Oils
ICUMSA GS 2/3-10 2011-07 (Revised)	The Determination of White Sugar Solution Colour - Official
ICUMSA GS 2/3-18 2013-09	Determination of the Turbidity of White Sugar Solutions- Official
VDLUFA Methodenbuch Volume III, 4.6.1 1976	Determination of urea
VDLUFA Methodenbuch Volume III, 5.4.1, 1. Supp. 1983	Determination of anisidine value
VDLUFA Methodenbuch Volume III 14.15.1 3rd Supp. 1993	Determination of formaldehyde in feeding stuffs (Modification: *Colour reagent, digestion, wavelength*)
VDLUFA Methodenbuch Volume III, 16.5.1 1976	Quantitative analysis of gossypol (free and total gossypol)
SOP M 1188 2014-12	Quantitative analysis of purine (calculated as theobromine) in cocoa products, photometric

-Translation-

1.7.2 Enzymatic determination of starch and inulin in foodstuffs *

ASU L 48.01-5 1985-05	Analysis of foodstuffs; determination of starch in partially adapted milk-based infant formula (Modification: *Determination of native starch in foodstuffs such as potatoes, cereals, bakery products, pastries, pasta, chocolate, cocoa and cocoa-containing products, ready meals, non-alcoholic beverages (including fruit juices), food supplements and meat, game, poultry and derivatives thereof (including sausage products) - enzymatic, degreasing and sugar degradation using 80% ethanol, enzymatic determination using an r-Biopharm Boehringer Mannheim test kit*)
ASU L 00.00-94 2006-09	Analysis of foodstuffs - Determination of inulin in foods - Enzymatic method

1.8 Titrimetric determination of fat indicators, nutritional values, undesirable substances, pH values, organic and inorganic acids in foodstuffs (including food supplements) and feeding stuffs as well as quantitative analysis of amino acids **

ISO 1578 1975-12	Tea - Determination of alkalinity of water-soluble ash
DIN EN ISO 660 2009-10	Animal and vegetable fats and oils - Determination of acid value and acidity
DIN EN ISO 3960 2017-05	Animal and vegetable fats and oils - Determination of peroxide value - Iodometric (visual) endpoint determination
DIN EN ISO 3961 2018-11	Animal and vegetable fats and oils - Determination of iodine value (ISO/DIS 3961:2018; German version EN ISO 3961:2018)
DIN 38414-S 19 1999-12	Determination of the steam-volatile organic acids
ASU L 01.00-10/1 2016-03	Analysis of foodstuffs - Determination of nitrogen content in milk and milk products; Part 1: Kjeldahl method and calculation of crude protein content; (adoption of standard of the same name DIN EN ISO 8968-1 June 2014 edition) (Modification: *Digestion, titration by automatic endpoint titration*)
ASU L 04.00-10 2019-03	Analysis of foodstuffs - Determination of common salt content of butter (Modification: *Titration by automatic endpoint titration*)

-Translation-

ASU L 05.00-15 2007-12	Analysis of foodstuffs - Determination of crude protein content in eggs and egg products (Modification: *Automatic addition of NaOH, automatic endpoint titration*)
ASU L 05.02-2 1995-01	Analysis of foodstuffs - Determination of common salt content in salted egg products (potentiometric method)
ASU L 06.00-7 2017-08	Analysis of foodstuffs - Determination of crude protein content in meat and meat products - Kjeldahl titrimetric method - Reference method (Modification: *Automatic addition of NaOH, automatic endpoint titration*)
ASU L 07.00-5/1 2010-01	Analysis of foodstuffs - Determination of common salt content (sodium chloride) in meat products - Potentiometric endpoint determination (Modification: *Half sample weight, extraction by shaker*)
ASU L 07.00-41 2006-09	Analysis of foodstuffs - Determination of non-protein nitrogen content in meat products
ASU L 08.00-7 2018-05	Analysis of foodstuffs - Determination of the crude protein content of sausages - Kjeldahl titrimetric method - Reference method
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
ASU L 13.05-6 1985-05	Analysis of foodstuffs - Determination of total protein content in margarine
ASU L 17.00-2 1982-05 with Corrigendum 2002-12	Determination of the degree of acidity in bread including small baked products made of bread dough
ASU L 17.00-6 1988-12 with Corrigendum 2009-06	Analysis of foodstuffs; determination of chloride for the calculation of common salt in bread, including small baked products made of bread dough (Modification: *Reduction of the sample weight to 5 g*)
ASU L 17.00-15 2013-08	Analysis of foodstuffs - Determination of crude protein content in bread including small baked products made of bread dough - Kjeldahl method

-Translation-

ASU L 18.00-13 2013-08	Analysis of foodstuffs - Determination of crude protein content in pastries
ASU L 20.01/02-4 1980-05	Determination of common salt content in mayonnaise and emulsified sauces (Modification: *Titration by automatic endpoint titration*)
ASU L 26.04-4 1987-06	Analysis of foodstuffs - Determination of titratable acids (total acid) in the cover brine and press liquor for sauerkraut
ASU L 31.00-3 1997-09	Analysis of foodstuffs - Determination of titratable acids (total acid) of fruit and vegetable juices (adoption of standard of the same name DIN EN 12147, February 1997 edition, as a replacement for the previous official method L 31.00-3, May 1980 edition)
ASU L 31.00-11 1984-11	Determination of sugar content before and after inversion in fruit juices (LUFF-SCHOORL method)
ASU L 46.02-1 2013-08	Analysis of foodstuffs - Determination of water content in roasted coffee by the Karl- Fischer method for roasted coffee; reference method (adoption of standard of the same name DIN 10772-1, June 2009 edition)
ASU L 46.02-3 2017-10	Analysis of foodstuffs; determination of pH value and degree of acidity; method for roasted coffee (adoption of standard of the same name DIN 10776-1, July 2016 edition)
ASU L 46.03-4 2017-10	Analysis of foodstuffs - Determination of pH and degree of acidity; method for coffee extract (adoption of standard of the same name DIN 10776 Part 2, July 2016 edition)
ASU L 46.03-5 2006-12	Analysis of foodstuffs - Determination of water content in coffee and coffee products by Karl Fischer method - Reference method for coffee extract (adoption of standard of the same name DIN 10772-2, May 2005 edition)
ASU L 52.06-3 1989-05 with Corrigendum 2002-12	Analysis of foodstuffs; determination of chloride for the calculation of common salt in mustard
DGF C-V 3 8th Supplement 2002-05	Saponification value

DGF E-III 10 (79) 1979	Water (Karl-Fischer method)
DGF F-I 4 (02) 2002-05	Water (Karl-Fischer method)
ICUMSA GS2/9-6 2011-07-01 (Revised)	The Determination of Reducing sugars in White Sugar and Plantation White Sugar by the Modified Ofner Titrimetric Method - Official
Ph. Eur. 9.0 - 2.2.20 01.12.2017	Potentiometry (potentiometric titration) - Quantitative analysis: Lysine hydrochloride, methionine, threonine, tryptophan, arginine, glycine, phenylalanine, valine, lysine monohydrate, arginine hydrochloride, cystine, tyrosine, isoleucine *(Here for analysis of pure substances in accordance with monograph*)
Ph. Eur. 9.0 - 2.5.12 2019-01-01 Methode A	Semi-micro determination of water - Karl Fischer method *(Here for analysis of substances in accordance with monograph*)
USP-NF (United States Pharmacopeia) USP42- NF37, Official as of 1-Jan-2018	Titrimetry - Assay: Glutamine *(Here for analysis of pure substances in accordance with monograph*)
VDLUFA Methodenbuch Volume II, 1. 3.2.1 1995	Determination of ammonium nitrogen (distillation with sodium hydroxide solution) (Modification: *Automatic distillation*)
VDLUFA Methodenbuch Volume II, 1. 3.2.2 (3.1.1) 2nd Supp. 2004	Determination of ammonium nitrogen, distillation with magnesium oxide
VDLUFA Methodenbuch Volume II, 1. 3.3.1 2nd Supp. 2004	Determination of nitrate and ammonium nitrogen, DEVARDA method
VDLUFA Methodenbuch Volume III, 4.1.1 3rd Supp. 1993	Determination of crude protein (Modification: *Kjeltabs, titration by automatic endpoint titration*)
VDLUFA Methodenbuch Volume III, 5.3.1. 1976	Determination of the degree of acidity of starch-rich material by SCHULERUD method

-Translation-

VDLUFA Methodenbuch Volume III 7.1.1 1976	Determination of sugar (Modification: *Titration by automatic endpoint titration*)
VDLUFA Methodenbuch Volume III 7.1.4 1976	Determination of lactose (Modification: *Titration by automatic endpoint titration*)
VDLUFA Methodenbuch Volume III, 4.8.2 1976	Determination of volatile nitrogenous bases: B. By distillation (Modification: *Use of Carrez I and II solution for precipitation for fishmeal, no boiling of distillate for fishmeal*)
VDLUFA Methodenbuch Volume III, 10.5.2 1976	Determination of chlorides (Modification: *Titration by automatic endpoint titration*)
VDLUFA Methodenbuch Volume III, 16.3.2 1976	Determination of hydrogen cyanide (Modification: *Titration by automatic endpoint titration, use also for foodstuffs such as nuts, nut products, sweets and confectionery products, milk powder, cereals, bakery products, pastries, pasta, chocolate, fats and oils, non-alcoholic and alcoholic beverages (including fruit juices)*
VDLUFA Methodenbuch Volume VI, C 8.4, 5th Supp. 2000	Determination of the titratable acidity of dried milk products
SOP M 1184 2010-11	Determination of zinc content by complexometry (in high-percentage zinc sources)
SOP M 1187 2010-07	Sulphide determination according to Reith - Willems and Zonneveld - Meyer in foodstuffs
SOP M 1191 2008-02	Titrimetric determination of the content of propionic acid in fishmeals and feedstuffs

1.9 Determination of physico-chemical indicators in foodstuffs (including food supplements) and feedstuffs

1.9.1. By near-infrared spectroscopy (FT-NIR) in olive oils

SOP M 3062 2014-06	Determination of peroxide value, acidity (FFA), 1,2-diacyylglycerols, pyropheophytin a, K232, K270 and anisidine value in olive oils using precalibrated FT-NIR (MPA) device from Bruker

1.9.2 Determination of pH value in foodstuffs by electrode measurement *

ASU L 04.00-13 2006-12	Analysis of foodstuffs - Determination of the pH value in butter serum
ASU L 05-00-11 1995-01	Analysis of foodstuffs - Determination of the pH value in eggs and egg products
ASU L 06.00-2 1980-09	Measurement of pH in meat and meat products
ASU L 13.05-5 1984-05	Analysis of foodstuffs; determination of the pH value in margarine
ASU L 20.01/02-1 1980-05	Determination 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 the pH-value of tomato concentrate
ASU L 31.00-2 1997-01	Analysis of foodstuffs - Determination of the pH value of fruit and vegetable juices (adoption of standard of the same name DIN EN 1132, December 1994 edition, as a replacement for the previous official method L 31.00-2, May 1980 edition)
VDLUFA Methodenbuch Volume VI, C 8.2 2000	Determination of the pH-value in milk and milk products

1.9.3 Identification of ingredients and additives in foodstuffs and feedstuffs and food supplements by melting point determination *

AOCS Official Method Cc 1-25 7th Edition 2017	Melting point, Capillary Tube Method
SOP M 1721 2009-02	Determination of the clear melting and boiling point by Büchi Melting Point B-540 at the Hamburg - Bergedorf location

1.9.4 Determination of the electrical conductivity of foodstuffs such as raw and white sugar, waste water and honey by conductometry *

DIN EN 27888 1993-11	Water quality - Determination of electrical conductivity (Modification: *Application also for foodstuffs such as honey*)
ASU L 39.01.02-1(EG) to 3(EG) Annex A.1. 1981-04	Test methods for quality determination of white sugar - Ash content
ICUMSA GS 2/3/9-17 2011-07	The Determination of Conductivity Ash in Refined Sugar Products and in Plantation White Sugar - Official

1.9.5 Determination of starch, polarisation and optical and specific rotation in foodstuffs (including food supplements) and feeding stuffs by polarimetry *

ASU L 17.00-5 2003-12	Analysis of foodstuffs - Determination of starch content in bread including small baked products made of bread dough
ASU L 18.00-6 2003-12	Analysis of foodstuffs - Determination of starch content in pastries
ASU L 39.00-E(EG) and 1(EG) to 10(EG), Annex II Method 10 1981-04	Analytical methods for determination of the composition of certain sugars intended for human consumption - Method 10: Determination of rotary ability (polarisation)
ICUMSA GS2/3-1 2011-07	The Braunschweig Method for the Polarisation of White Sugar by Polarimetry- Official (Reference) Method
Ph. Eur. 9.5 - 2.2.7 2019-07-01	Optical rotation *(Here determination in substances from monograph)*

-Translation-

VDLUFA Methodenbuch Volume III, 7.2.1 8th Supp. 2012	Determination of starch, polarimetric method

1.9.6 Determination of wet gluten content in wheat flour using the gluten index method *

ICC - Standard Nr. 137/1 1994	Mechanical determination of wet gluten content in wheat flour (Glutomatic)
ICC - Standard Nr. 155 1994	Determination of wet gluten quantity and quality (Perten gluten index) of whole grain wheat meal and wheat flour (Triticum aestivum)

1.9.7 Determination of the falling number in foodstuffs by falling number measurement

DIN EN ISO 3093 2010-05	Wheat, rye and their flours, durum wheat and durum wheat semolina - Determination of the falling number according to Hagberg-Perten (ISO 3093:2009); German version EN ISO 3093:2009

1.9.8 Determination of the smoke point of fats and oils using Cleveland smoke point apparatus

DGF C-IV 9 (02) 8. Erg. 2002-05	Smoke point (Modification: *Lamp structure*)

1.9.9 Determination of the pellet hardness of feeding stuffs using the Chatillion Pellet Breaker Tester

SOP M 2154 2011-04	Determination of Pellet Hardness Grade of feeding stuffs at the HH-Bergedorf location using the Chatillion Pellet Breaker Tester (breaking strength method)

1.9.10 Determination of polar compounds content in deep-frying fats by column chromatography

ASU L 13.07.12-1 2006-12	Analysis of foodstuffs - Determination of polar compounds content in deep-frying fats (adoption of standard of the same name DIN EN ISO 8420, August 2002 edition)

-Translation-

1.9.11 Determination of the colour type of white sugar by simple visual examination *

ASU L 39.01.02-2 (EG) 1981-04	Test methods for determination of the quality of white sugar - Colour type (according to Braunschweig)
ICUMSA GS2-11 2007-03	The Determination of the Visual Appearance of White Sugar using Braunschweig Colour-Types - Official

1.9.12 Determination of soluble dry matter (Brix) in foodstuffs by refractometry *

ASU L 26.11.03-1 1983-05	Determination of the dry matter content in tomato concentrate by refraction measurement
ASU L 40.00-2/2 2019-07	Analysis of foodstuffs - Analysis of honey - Determination of water content - Part 2: Digital refractometric method (adoption of standard of the same name DIN 10752-2, September 2018)
ICUMSA GS4/3/8-13 2009-11-01 (Revised)	The Determination of Refractometric Dry Substance (RSD %) of Molasse - Accepted - and Very Pure Syrups (Liquids Sugars), Thick Juice and Run-off Syrups - Official
VDLUFA Methodenbuch Volume III, 22.4 2nd Supp. 1988	Refractometric determination of the dry matter content in molasses

1.9.13 Determination of alveograph properties of dough

DIN EN ISO 27971 2015-11	Cereals and cereal products - Common wheat (Triticum aestivum L.) - Determination of alveograph properties of dough at constant hydration from commercial or test flours and test milling methodology (ISO 27971:2015); German version EN ISO 27971:2015

1.9.14 Determination of volatile oil content of foodstuffs by distillation

DIN EN ISO 6571 2018-03	Spices, condiments and herbs - Determination of volatile oil content (hydrodistillation method) (ISO 6571:2008 + Amd 1:2017); German version EN ISO 6571:2009 + A1:2017

1.9.15 Pressure testing of vacuumed food packaging by vacuum measurement

SOP M 1722 2009-09	Pressure testing of vacuumed food packaging by vacuum gauge (Vacuubrand, DCP 3000 with pressure sensor VSK 3000)

1.9.16 Density measurement of foodstuffs by oscillating U-tube or Hubbard method

DGF C-IV 2d (16) 22. Akt.-Lfg. 2016	Density - Oscillating U-tube method
Guidelines for the volume examination of finished products 10.6 using a Hubbard pycnometer 13 June 1996	Determination of the density of delicatessen sauces, mayonnaise, mustard and ready-to-eat soups

1.9.17 Determination of total nitrogen in foodstuffs, feeding stuffs and fertilisers using combustion according to the Dumas principle *

DIN EN ISO 14891 2002-07	Milk and milk products - Determination of nitrogen content - Routine method using combustion according to the Dumas principle (ISO 14891:2002); German version EN ISO 14891:2002
DIN EN ISO 16634-1 2009-07	Food products - Determination of the total nitrogen content by combustion according to the Dumas principle and calculation of the crude protein content - Part 1: Oilseeds and animal feeding stuffs (ISO 16634-1:2008) German version EN ISO 16634-1:2008
ICC-STANDARD Nr. 167 2000	Determination of crude protein in grain and grain products for food and feed by the Dumas Combustion Principle
VDLUFA Methodenbuch Volume II.1, 3.5.2.7 7th Supp. 2019-01	Determination of total nitrogen - Combustion method

1.9.18 Determination of the water absorption capacity of wheat flours and of physical properties of wheat flour dough using the consistograph

ICC - Standard Nr. 171 2004	Determination of the water absorption capacity of wheat flours and of physical properties of wheat flour dough using the consistograph

-Translation-

1.9.19 Determination of water activity in foodstuffs (including food supplements) and feeding stuffs by aW-value measurement

ISO 18787 2017-11	Foodstuffs -Determination of water activity *(Here also application to food supplements*)

1.9.20 Determination of radioactivity in foodstuffs and feeding stuffs by gamma spectrometry

ASU L 00.00-14 1986-11	Analysis of foodstuffs, measurement of radioactivity in foodstuffs (Modification: *Also application to feedstuffs*)

1.10 Gravimetric determination of nutritional values, fibres, fat indicators, quality control characteristics (for cereals, coffee, tea, sugar, milk powder), particle size, bulk density, component distribution, fill quantity, drained weight and glaze content in foodstuffs (including food supplements) and feeding stuffs *

ISO 1577 1987-10	Tea - Determination of acid-insoluble ash
ISO 7514 1990-10	Instant tea in solid form - Determination of total ash
DIN ISO 9768 1999-07	Tea - Determination of water extract (ISO 9768:1994)
DIN ISO 6673 2007-03	Green coffee - Determination of loss in mass at 105 °C (ISO 6673:2003)
DIN EN ISO 659 2009-11	Oilseeds - Determination of oil content (reference method) (ISO 659:2009); German version EN ISO 659:2009 (Modification: *Once-only grinding in ball mill and once-only extraction over 10 hours*)
DIN EN ISO 662 2016-08	Animal and vegetable fats and oils - Determination of moisture and volatile matter content (ISO 662:2016); German version EN ISO 662:2016
DIN EN ISO 663 2017-05	Animal and vegetable fats and oils - Determination of insoluble impurities content (ISO 663:2017); German version EN ISO 663:2017
DIN EN ISO 665 2001-02	Oil seeds - Determination of moisture and volatile matter content (ISO 665:2000); German version EN ISO 665:2000

-Translation-

DIN EN ISO 939 (draft) 2009-02	Spices and condiments - Determination of moisture content - Entrainment method (*standard withdrawn*)
DIN EN ISO 3596 2002-03	Animal and vegetable fats and oils - Determination of unsaponifiable matter - Method using diethyl ether extraction (ISO 3596:2000); German version EN ISO 3596:2001
DIN EN ISO 5529 2010-08	Wheat - Determination of the sedimentation index - Zeleny test (ISO 5529:2007); German version EN ISO 5529:2010
DIN EN ISO 7971-3 2019-06	Grains - Determination of bulk density, called mass per hectolitre - Part 3: Routine method (ISO 7971-3:2019); German version EN ISO 7971-3:2019
DIN EN 1235 2003-08	Solid fertilisers - Test sieving (ISO 8397:1988 modified) (including Amendment A1:2003); German version EN 1235:1995 + A1:2003
DIN EN 12879 2001-02	Characterisation of sludges - Determination of loss on ignition of dry mass (*document withdrawn*) *(Here application to biogas sewage sludge*)
DIN EN 12880 2001-02	Characterisation of sludges - Determination of dry residue and water content *(Here application to biogas sewage sludge*)
ASU L 00.00-18 1997-01, Corrigendum 2017-10	Analysis of foodstuffs - Determination of fibre in foodstuffs; Corrigendum (Modification: *Determination of protein according to the Dumas principle*)
ASU L 01.00-9 2012-01	Analysis of foodstuffs - Determination of fat content in milk - Gravimetric method (reference method) (adoption of German standard of the same name DIN EN ISO 7208, March 2009 edition)
ASU L 01.00-20 2013-08	Analysis of foodstuffs - Determination of fat content in milk and milk products using the Weibull-Berntrop gravimetric method (adoption of standard of the same name DIN 10342, September 1992 edition)
ASU L 01.00-27 1988-12	Analysis of foodstuffs - Determination of dry matter content of milk and cream; reference method

-Translation-

ASU L 01.00-38 2009-06	Analysis of foodstuffs - Determination of fat content in skimmed milk, whey and buttermilk - Gravimetric method (reference method) (adoption of German standard of the same name DIN EN ISO 7208, March 2009 edition)
ASU L 01.00-77 2002-05	Analysis of foodstuffs - Determination of total ash in milk and milk products (adoption of standard of the same name DIN 10477, August 2000 edition)
ASU L 02.05-2 2009-06	Analysis of foodstuffs - Determination of fat content in cream - Gravimetric method (reference method) (adoption of German standard of the same name DIN EN ISO 2450, March 2009 edition)
ASU L 02.06-1(EG) 1981-01	Analytical methods relating to the composition of certain partly or wholly dried, preserved milk products; method 1: Determination of dry matter (condensed milk)
ASU L 02.06-2(EG) 1981-01	Analytical methods relating to the composition of certain partly or wholly dried, preserved milk products; method 2: Determination of water content (milk powder)
ASU L 02.06-12 2009-06	Analysis of foodstuffs - Determination of fat content in condensed milk and sweetened condensed milk - Gravimetric method (reference method) (adoption of German standard of the same name DIN EN ISO 1737, March 2009 edition)
ASU L 02.07-15 2009-06	Analysis of foodstuffs - Determination of fat content in milk powder and dry milk products - Gravimetric method (adoption of German standard of the same name DIN EN ISO 1736, March 2009 edition)
ASU L 03.00-8 2007-04	Analysis of foodstuffs - Determination of fat content of cheese and processed cheese - Schmid-Bondzynski-Ratzlaff gravimetric method (reference method) (adoption of German standard of the same name DIN EN ISO 1735, May 2005 edition)
ASU L 03.00-9 2007-04	Analysis of foodstuffs - Determination of total dry matter of cheese and processed cheese (adoption of German standard of the same name DIN EN ISO 5534, September 2004 edition)
ASU L 03.00-10 2013-08	Analysis of foodstuffs - Determination of fat content of cheese by the Weibull-Berntrop gravimetric method (adoption of standard of the same name DIN 10342, September 1992 edition)

-Translation-

ASU L 05.00-12 2012-01	Analysis of foodstuffs - Determination of dry matter in eggs and egg products
ASU L 05.00-13 1991-06	Analysis of foodstuffs - Determination of ash in eggs and egg products
ASU L 05.00-14 1991-06	Analysis of foodstuffs - Determination of total lipid content 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
ASU L 06.00-4 2017-10	Analysis of foodstuffs - Determination of ash in meat, meat products and sausages - Gravimetric method (reference method)
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
ASU L 13.05-1 1984-05	Analysis of foodstuffs - Determination of water content in margarine
ASU L 13.05-3 2002-05	Analysis of foodstuffs - Determination of fat content in margarine and other fat spreads - Modified method based on method K-I 2 a from the German standard methods for analysis of fats, fat products and related substances (Wissensch. Verlagsges. m.b.H. Stuttgart)
ASU L 15.00-6 2011-06	Analysis of foodstuffs - Determination of moisture content in cereals and cereal products - Reference method (adoption of standard of the same name DIN EN ISO 712, April 2010 edition)
ASU L 16.01-2 2008-12	Analysis of foodstuffs - Determination of ash in cereal flour
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 17.00-1 1982-05 with Corrigendum 2002-12	Determination of loss on drying in bread including small baked products made of bread dough; Corrigendum

ASU L 17.00-3 1982-05 with Corrigendum 2002-12	Determination of ash in bread including small baked products made of bread dough; Corrigendum
ASU L 18.00-4 1984-11	Analysis of foodstuffs - Determination of ash in pastries
ASU L 20.01/02-3 1980-05	Determination of dry matter in mayonnaise and emulsified sauces
ASU L 20.01/02-5 1980-05	Determination of total fat content in mayonnaise and emulsified sauces (Modification: *Filter drying 70 °C*)
ASU L 26.11.03-1a 1983-05	Determination of the dry matter content of tomato purée (gravimetric method)
ASU L 26.26.01-1 (EG) 1983-05	Determination of the dry matter content of tomato juice
ASU L 31.00-4 1997-01	Analysis of foodstuffs - Determination of ash in fruit and vegetable juices (adoption of standard of the same name DIN EN 1135, December 1994 edition, as a replacement for the previous official method L 31.00-4, May 1980 edition)
ASU L 31.00-18 1997-09	Analysis of foodstuffs - Determination of total dry matter in fruit and vegetable juices - Gravimetric method with loss in mass through drying (adoption of standard of the same name DIN EN 12145, October 1996 edition)
ASU L 39.00-1 (EG) 1981-04	Analytical methods for determination of the composition of certain types of sugar for human consumption - Determination of loss in mass through drying
ASU L 39.00-2 (EG) 1981-04	Analytical methods for determination of the composition of certain types of sugar for human consumption - Determination of dry matter (vacuum drying)
ASU L 39.00-9 (EG) 1981-04	Analytical methods for determination of the composition of certain types of sugar for human consumption - Determination of sulphated ash
ASU L 44.00-3 1985-12	Analysis of foodstuffs; determination of dry matter content in solid chocolate

-Translation-

ASU L 44.00-4 1985-12	Analysis of foodstuffs; determination of total fat content in chocolate
ASU L 46.02-2 2017-10	Analysis of foodstuffs - Determination of water-soluble extract content - Method for roasted coffee (adoption of standard of the same name DIN 10775, July 2016 edition)
ASU L 47.00-1 2017-10	Analysis of foodstuffs - Determination of loss in mass of unground tea (adoption of standard of the same name DIN 10800, July 2016 edition)
ASU L 47.00-3 2017-10	Analysis of foodstuffs - Determination of total ash in tea (adoption of standard of the same name DIN 10802, April 2016 edition)
ASU L 47.00-8 1992-12	Analysis of foodstuffs; analysis of tea; determination of water-soluble ash and water-insoluble ash
ASU L 52.06-2 1988-05	Analysis of foodstuffs; determination of total fat content in mustard (Modification: *Filter drying 70 °C*)
ASU L 53.00-4 1996-02	Analysis of foodstuffs - Analysis of spices and seasoning ingredients - Determination of total ash and acid-insoluble ash (adoption of German standard of the same name DIN 10223, January 1996 edition)
AOCS Ja 3-87 7th Edition 2017	Hexane - Insoluble Matter in Vegetable Lecithins
AOCS Ja 4-46 7th Edition 2017	Acetone - Insoluble Matter in Vegetable Lecithins
CODEX STAN 165 2017	Codex Standard for quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh.
ICA Analytical Method 37 1990	Determination of the fat content of cocoa powder after Soxhlet extraction
ICUMSA GS2/1/3/9-15 2007-03	The Determination of Sugar Moisture by Loss on Drying - Official
ICUMSA GS2/3/9-19 2007-04	The Determination of Insoluble Matter in White Sugar by Membrane Filtration - Official

-Translation-

ICUMSA GS2/3-40 Methode A 2007-01	The ICUMSA 10-Day Acid Beverage Floc Test for White Sugar - Official
ICUMSA GS2/9-37 2007-04	Determination of Particle Sze Distribution of White Sugar and Plantation White Sugars by Sieving - Accepted, (Modifikation: *Analyse mittels Luftstrahlsiebung*)
ICUMSA GS4/7-11 1994-02	The Determination of Dry Substance and Moisture in Molasses by Vakuum Oven Drying on Sand - Official
Ph. Eur. 9.0 - 2.4.14 01.12.2017	Sulphated ash *(Here for analysis of substances in accordance with monograph*)
UNECE Standard, annex I, Edition 2011	Determination of the Moisture content for Dried Fruits
VDLUFA Methodenbuch Volume III, 3.1 1976	Moisture in feeding stuffs
VDLUFA Methodenbuch Volume III, 5.1.1. 2nd Supp. 1988	Determination of crude fat - Official method
VDLUFA Methodenbuch Volume III, 6.1.1 3rd Supp. 1993	Determination of crude fibre (Modification: *Analysis with Rohfix apparatus*)
VDLUFA Methodenbuch Volume III, 6.5.1 8th Supp. 2012	Determination of neutral detergent fibre (NDF) after amylase treatment (aNDF) and after amylase treatment and ashing (aNDFom) - Association method (Modification: *Filtration using fibre bags*)
VDLUFA Methodenbuch Volume III, 6.5.2 8th Supp. 2012	Determination of acid detergent fibre (ADF) and acid detergent fibre after ashing (ADFom) (Modification: *Filtration using fibre bags*)
VDLUFA Methodenbuch Volume III, 6.5.3 8th Supp. 2012	Determination of acid detergent lignin (ADL) (Modification: *Filtration using fibre bags*)
VDLUFA Methodenbuch Volume III, 8.1 1976	Determination of raw ash in feeding stuffs

-Translation-

VDLUFA Methodenbuch Volume III, 8.2 1976	Determination of ash insoluble in hydrochloric acid
VDLUFA Methodenbuch Volume VI, C 15.2.4 3rd Supp. 1995	Determination of free fat in dried milk products
VDLUFA Methodenbuch Volume VI C 26.3 3rd Supp. 1995	Determination of the degree of purity of milk powder (in accordance with ADPI)
SOP M 1060 2010-12	Determination of milk protein in chocolate (Modification: *Protein determination using Dumas*)
SOP M 1723 2009-09	Determination of the bulk density in accordance with Damolin MORS
SOP M 2152 2011-06	Component distribution for foodstuffs and feeding stuffs
SOP M 2153 2011-05	Determination of the meat content of chewing bones
SOP M 2475 2011-06	Count and 1000 grain mass determination
SOP M 2476 2013-10	Volume examination of prepackages for foodstuffs and feeding stuffs - Fill quantity, drained weight
SOP M 2477 2014-04	Determination of soluble and insoluble fibre in foodstuffs
SOP M 2899 2013-10	Determination of paraffin on raisins by gravimetry

1.11 Detection of mycotoxins by enzyme immunoassay (ELISA) in feedstuffs and cereals *

Tecna Celer DON v3 MD100 V.22 2017-06	Enzyme immunoassay for the determination of deoxynivalenol in feeding stuffs and cereals

-Translation-

Tecna Celer-ZEA MZ670 V.1 2017-01	Enzyme immunoassay for the determination of zearalenone in feeding stuffs and cereals

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

Sampling

Method	Title
DIN EN ISO 19458 (K 19) 2006-12	Water quality - Sampling for microbiological analysis

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

ANNEX 3: INDICATOR PARAMETERS

Part I: General indicator parameters

Seq. no.	parameters	Method
1	Aluminium	Not used
2	Ammonia	Not used

-Translation-

Seq. no.	parameters	Method
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	Not used
9	Taste	Not used
10	Colony count at 22 °C	DIN EN ISO 6222 (K 5) 1999-07 TrinkwV § 15 Absatz (1c)
11	Colony count at 36 °C	DIN EN ISO 6222 (K 5) 1999-07 TrinkwV § 15 Absatz (1c)
12	Electrical conductivity	Not used
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	Not used
20	Calcite dissolving capacity	Not used
21	Tritium	Not used
22	Total indicative dose	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 2018-12

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 Regulation 2001 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.

-Translation-

3 Macroscopic and microscopic analysis of impurities in feedstuffs and foodstuffs

3.1 Determination of impurities and quality characteristics in foodstuffs by simple visual examination *

ISO 7970 2011-11	Wheat (Triticum aestivum L.) - Specifications
DIN EN ISO 658 2002-08	Oilseeds - Determination of content of impurities (ISO 658:2002); German version EN ISO 658:2002
Gafta Method 26:1 2018-01	Impurities in cereals
TS 3075 2002-11	Hazelnut Kernels Standard
UNECE Standard DDP-08 2015	Concerning the marketing and commercial quality control of dates
UNECE Standard DDP-09 2016	Concerning the marketing and commercial quality control of inshell Pistachio nuts
UNECE Standard DDP-10 2010	Concerning the marketing and commercial quality control of Pistachio kernels and Peeled Pistachio kernels
UNECE Standard DDP-11 2016	Concerning the marketing and commercial quality control of Dried Grapes
UNECE Standard DDP-14 2016	Concerning the marketing and commercial quality control of Dried Figs
UNECE Standard DDP-15 2016	Concerning the marketing and commercial Quality control of Dried Apricots
UNECE Standard DDP-18 2017	Concerning the Marketing and commercial quality control of inshell Almonds

3.2 Determination of impurities in foodstuffs and feedstuffs by optical microscopy **

VDLUFA Volume III 30.2 7th Supp. 2007	Determination of ergot in feedstuffs
VDLUFA Volume III 30.3 7th Supp. 2007	Determination of Datura spp. in feedstuffs

-Translation-

VDLUFA Volume III 30.5 8th Supp. 2012	Determination of castor seed husk
VDLUFA Volume III 30.7 8th Supp. 2012	Identification and estimation of constituents in feedstuffs
VDLUFA Volume III 30.8 8th Supp. 2012	Determination of Ambrosia artemisiifolia L. in unpressed feedstuffs
SOP M 1313 2018-02	Filth in sugar
SOP M 1365 2019-01	Filth in flour and puffed grain
SOP M 1366 2019-01	Filth in chocolate and cocoa
SOP M 2868 2018-02	Filth in syrup, molasses and honey
SOP M 2869 2018-02	Filth in starch
SOP M 3317 2019-01	Filth in finished products containing starch and fat
SOP M 2083 2018-06	Macroscopic and microscopic mould detection
SOP M 2084 2012-07	Microscopic detection and estimation of animal constituents in straight and compound feedstuffs
SOP M 2873 2015-10	Macroscopic determination of packaging residues in recycled feedstuffs
SOP M 2874 2016-07	Microscopic detection of legume components in hazelnut paste
SOP M 2877 2015-12	Macroscopic determination of the botanical purity of straight feedstuffs
SOP M 3316 2017-05	Simple determination of purity by visual and macroscopic assessment in nuts and dried fruits

-Translation-

SOP M 3320 2017-10	Microscopic analysis for mite infestation in foodstuffs and feedstuffs

4 Microbiological analysis of foodstuffs (including food supplements), feedstuffs, packaging materials and cosmetic products

4.1 Preparation of samples for microbiological analysis by using dilutions *

DIN EN ISO 6887-2 2017-07	Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 2: Specific rules for the preparation of meat and meat products (ISO 6887-2:2017)
DIN EN ISO 6887-3 2017-07	Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 3: Specific rules for the preparation of fish and fish products (ISO 6887-3:2017)
DIN EN ISO 6887-4 2017-07	Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 4: Specific rules for the preparation of other products (ISO 6887-4:2017)
DIN EN ISO 6887-5 2011-01	Microbiology of food and animal feeding stuffs - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 5: Specific rules for the preparation of milk and milk products (ISO 6887-5:2010)
DIN EN ISO 6887-6 2013-06	Microbiology of food and animal feeding stuffs - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 6: Specific rules for the preparation of samples taken at the primary production stage (ISO 6887-6:2013)

4.2 Sampling techniques

DIN EN ISO 18593 2018-10	Microbiology of the food chain - Horizontal method for surface sampling

4.3 Determination of bacteria, yeasts and moulds by cultural microbiological analysis of foodstuffs (including food supplements) and feedstuffs **

ISO 4831 2006-08	Microbiology - Horizontal method for the detection and enumeration of coliforms - MPN technique
ISO 4832 2006-02	Horizontal method for the detection and enumeration of coliforms - Colony-count technique
ISO 7954 1987-11	Microbiology; General guidance for enumeration of yeasts and moulds; Colony count technique at 25 degrees C (*standard withdrawn*)
ISO 15213 2003-05	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of sulphite-reducing bacteria growing under anaerobic conditions
ISO 15214 1998-08	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of mesophilic lactic acid bacteria -- Colony-count technique at 30 degrees C
ISO 21527-1 2008-07	Horizontal method for the enumeration of yeasts and moulds - Colony-count technique - Part 1: Colony count technique in products with water activity greater than 0,95
DIN ISO 16649-2 2009-12	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of β-glucuronidase-positive Escherichia coli - Part 2: Colony-count technique at 44 °C using 5-bromo-4-chloro-3-indolyl β-D-glucuronide (ISO 16649-2:2001)
ISO 21527-2 2008-07	Horizontal method for the enumeration of yeasts and moulds - Colony-count technique - Part 2: Colony count technique in products with water activity equal to or less than 0,95
DIN EN ISO 4833-1 2013-12	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 (ISO 4833-1:2013)
DIN EN ISO 6579-1 2017-07	Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella - Part 1: Detection of Salmonella spp. (ISO 6579-1:2017) (Deviation: *No application of Annex D*)

-Translation-

DIN EN ISO 6888-1 2019-06	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) - Part 1: Technique using Baird-Parker agar medium (ISO 6888-1:1999 + Amd 1:2003 + Amd 2:2018); German version EN ISO 6888-1:1999 + A1:2003 + A2:2018
DIN EN ISO 6888-2 2003-12	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) - Part 2: Technique using rabbit plasma fibrinogen agar medium (ISO 6888-2:1999 + AMD 1:2003)
DIN EN ISO 6888-3 2005-07	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) - Part 3: Detection and MPN technique for low numbers (ISO 6888-3:2003)
DIN EN ISO 7932 2005-03	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of presumptive Bacillus cereus - Colony-count technique at 30 degrees C (ISO 7932:2004)
DIN EN ISO 7937 2004-11	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of Clostridium perfringens - Colony-count technique (ISO 7937:2004)
DIN EN ISO 10272-1 2017-09	Microbiology of the food chain - Horizontal method for the detection and enumeration of Campylobacter spp. - Part 1: Detection method (ISO 10272-1:2017)
DIN EN ISO 11290-1 2017-09	Microbiology of the food chain - Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. -- Part 1: Detection method (ISO 11290-1:2017)
DIN EN ISO 11290-2 2017-09	Microbiology of the food chain - Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. -- Part 2: Enumeration method (ISO 11290-2:2017)
DIN EN ISO 13720 2010-12	Meat and meat products - Enumeration of presumptive Pseudomonas spp. (ISO 13720:2010)
DIN EN ISO 16649-3 2018-01	Enumeration of ß-glucuronidase positive Escherichia coli - Part 3: Detection and most probable number technique using 5-bromo-4-chloro-3-indolyl-β-D-glucuronide

-Translation-

DIN EN ISO 21528-1 2017-09	Microbiology of the food chain - Horizontal method for the detection and enumeration of Enterobacteriaceae - Part 1: Detection of Enterobacteriaceae (ISO 21528-1:2017) (Modification: *Confirmation with MALDI Biotyper System*)
DIN EN ISO 21528-2 2019-05	Microbiology of the food chain - Horizontal method for the detection and enumeration of Enterobacteriaceae - Part 2: Colony-count technique (ISO 21528-2:2017, Corrected version 2018-06-01); German version EN ISO 21528-2:2017 (Modification: *Confirmation with MALDI Biotyper System*)
DIN EN ISO 21871 2006-04	Microbiology of food and animal feeding stuffs - Horizontal method for the determination of low numbers of presumptive Bacillus cereus - Most probable number technique and detection method (ISO 21871:2006)
DIN EN ISO 22964 2017-08	Microbiology of the food chain - Horizontal method for the detection of Cronobacter spp.
DIN 10106 2017-04	Microbiological analysis of meat and meat products - Determination of Enterococcus faecalis and Enterococcus faecium - Spatula method (reference method)
Ph. Eur. 9 - 2.6.12 2017-12	Testing for microbial contamination of non-sterile pharmaceutical products - Count of germs capable of reproduction (*Here for analysis of foodstuffs and food supplements*)
Ph. Eur. 9 - 2.6.13 2017-12	Testing for microbial contamination of non-sterile pharmaceutical products - Detection of specified microorganisms (*Here for analysis of foodstuffs and food supplements*)
Ph. Eur. 9 - 2.6.31 2017-12	Microbiological examination of herbal medicinal products for oral use (*Here for analysis of foodstuffs and food supplements*)
Bio-Rad AL Short protocol V.4, 2013-06	Detection of *Listeria monocytogenes and Listeria spp.* in foodstuffs and environmental samples from production (*Validated alternative method, reference method: ISO 11290-1:2017*)
Bio-Rad Rapid L mono Methode Rev.14, 2019-07	Detection of *Listeria monocytogenes and Listeria spp.* in foodstuffs and environmental samples from production (*Validated alternative method, reference method: ISO 11290-1:2017*)

-Translation-

In-house method MIB M 1.1.5 2014-01	Aerobic thermophilic bacterial count - Enumeration method with plate-count agar (PC) and incubation at 55 °C (*Application for foodstuffs, food supplements, feedstuffs*)
In-house method MIB M 1.1.6 2014-01	Anaerobic mesophilic bacterial count - Enumeration method with plate-count agar (PC) and anaerobic incubation (*Application for foodstuffs, food supplements, feedstuffs*)
In-house method MIB M 1.1.7 2014-01	Anaerobic thermophilic bacterial count - Enumeration method with plate-count agar (PC) and incubation at 55 °C (*Application for foodstuffs, food supplements, feedstuffs*)
In-house method MIB M 1.1.8 2014-01	Spores of aerobic mesophilic germs - Enumeration method with plate-count agar (PC) after pasteurisation (*Application for foodstuffs, food supplements, feedstuffs*)
In-house method MIB M 1.1.9 2014-01	Spores of aerobic thermophilic germs - Enumeration method with plate-count agar (PC) after pasteurisation and incubation at 55 °C (*Application for foodstuffs, food supplements, feedstuffs*)
In-house method MIB M 1.1.10 2014-01	Spores of anaerobic mesophilic germs - Enumeration method with plate-count agar (PC) after pasteurisation and anaerobic incubation (*Application for foodstuffs, food supplements, feedstuffs*)
In-house method MIB M 1.1.11 2014-01	Spores of anaerobic thermophilic germs - Enumeration method with plate-count agar (PC) after pasteurisation and anaerobic incubation at 55 °C (*Application for foodstuffs, food supplements, feedstuffs*)

4.4 Determination of bacteria, yeasts and moulds in cosmetic products by cultural microbiological analysis *

DIN EN ISO 16212 2017-09	Cosmetics - Microbiology -Enumeration of yeast and mould (ISO 16212:2017)
DIN EN ISO 18415 2017-09	Cosmetics - Microbiology - Detection of specified and unspecified microorganisms (ISO 18415:2017)
DIN EN ISO 18416 2018-01	Cosmetics - Microbiology - Detection of Candida albicans (ISO 18416:2015, Corrected version 2016-12-15)
DIN EN ISO 21149 2017-11	Cosmetics - Microbiology -Enumeration and detection of aerobic mesophilic bacteria ISO 21149:2017

-Translation-

DIN EN ISO 21150 2016-05	Cosmetics - Microbiology - Detection of Escherichia coli (ISO 21150:2015)
DIN EN ISO 22717 2016-05	Cosmetics - Microbiology - Detection of Pseudomonas aeruginosa (ISO 22717:2015)
DIN EN ISO 22718 2016-05	Cosmetics - Microbiology - Detection of Staphylococcus aureus (ISO 22718:2015)
Ph. Eur. 9 - 2.6.12 2017-12	Testing for microbial contamination of non-sterile pharmaceutical products - Count of germs capable of reproduction (*Here for analysis of cosmetic products*)
Ph. Eur. 9 - 2.6.13 2017-12	Testing for microbial contamination of non-sterile pharmaceutical products - Detection of specified microorganisms (*Here for analysis of cosmetic products*)

4.5 Determination of the antimicrobial protection of cosmetic products against bacteria, yeasts and moulds by cultural microbiological analysis *

DIN EN ISO 11930 2019-04	Cosmetics - Microbiology - Evaluation of the antimicrobial Protection of a cosmetic product (ISO 11930:2019, German version DIN EN ISO 11930:2019)
Ph. Eur. 9 - 5.1.3 2017-12	Testing for adequate antimicrobial preservation (*Here for analysis of cosmetic products*)

4.6 Determination of bacteria, yeasts and moulds in packaging materials by cultural microbiological analysis *

DIN 10050-3 1999-09	Testing of butter wrappers - Part 3: Colony count
DIN ISO 8784-1 2016-05	Pulp, paper and board - Microbiological examination - Part 1: Enumeration of bacteria and bacterial spores based on disintegration
ISO/DIS 8784-3 2019-04 - Draft	Pulp, paper and board - Microbiological examination - Part 3: Enumeration of yeast and mould based on disintegration

4.7 Sample preparation for real-time PCR analysis by extraction *

foodproof® StarPrep One Kit Biotecon Diagnostics Version 5, 2017-01	For the extraction of bacterial DNA (gram-negative bacteria) from food fortifications by heat-induced lysis.
foodproof® StarPrep Three Kit Biotecon Diagnostics Version 2, 2017-01	For the extraction of bacterial DNA (gram-negative bacteria) from food fortifications by heat-induced lysis.
foodproof® ShortPrep II Biotecon Diagnostics Version 2, 2012-03	For the extraction of bacterial DNA (gram-positive bacteria) from food fortifications by heat induced lysis.

4.8 Determination of bacteria in foodstuffs, feedstuffs and food supplements by real-time PCR *

DIN 10135 2013-05	Microbiology of food and animal feeding stuffs - Polymerase chain reaction for the detection of food-borne pathogens - Method for the detection of salmonella
DIN CEN ISO/TS 13136 2013-04	Microbiology of food and animal feed - Real-time polymerase chain reaction (PCR)-based method for the detection of food-borne pathogens - Horizontal method for the detection of Shiga toxin-producing Escherichia coli (STEC) and the determination of O157, O111, O26, O103 and O145 serogroups.
ASU L 00.00-98 2007-04	Analysis of foodstuffs - Qualitative detection of salmonella in foodstuffs - PCR method
foodproof® Salmonella LyoKit - 5´Nuclease Biotecon Diagnostics Version 5, 2017-09	Qualitative detection of Salmonella spp. by real-time PCR.
foodproof® STEC Screening LyoKit - 5´Nuclease Biotecon Diagnostics Version 2, 2017-08	Qualitativer Nachweis von Shiga-Toxin bildenden Escherichia coli (STEC) durch Screening auf Gene von Shiga-Toxinen (stx1 und stx2) und intim (eae) mittels real-time-PCR.
foodproof® STEC Identification LyoKit - 5´Nuclease Biotecon Diagnostics Version 2, 2018-01	Qualitative detection of Shiga toxin-producing Escherichia coli (STEC) and determination of the O26, O45, O103, O104, O111, O121, O145 and O157 serogroups by real-time PCR.

-Translation-

foodproof® Listeria Genus Detection LyoKit - 5´Nuclease Biotecon Diagnostics Version 1, 2017-05	Qualitative detection of the “sensu stricto” Listeria spp. (L. monocytogenes, L. seeligeri, L. ivanovii, L. welshimeri, L. innocua and L. marthii) by real-time PCR.

4.9 Other microbiological analysis in various matrices

In-house method SOP M 1677 2017-01	Determination of airborne germ content - Sedimentation / impaction with subsequent enumeration of culture media
Meat Hygiene Regulation 1986 Annex 1 (2,4)	Inhibitors in musculature and kidney (three-plate test with TMP)
Ph. Eur. 9, 2.6.14 2017-12	Test for bacteria endotoxins (LAL test) (*Here for analysis of soybean phospholipid*)
In-house method SOP M 944 2017-01	Identification of microorganisms by microscopy and biochemical reactions: aminopeptidase, cytochrome oxidase, catalase
In-house method SOP M 1704 2011-10	Identification of microorganisms with the MALDI Biotyper System using the Bruker database

5 Analysis of culture media in the area of foodstuffs, feedstuffs and water

DIN EN ISO 11133 2018-07	Microbiology of food, animal feed and water - Preparation, production, storage and performance testing of culture media (ISO 11133:2014 + Amd 1:2018)

6 Testing of disinfectants and testing of chemical-thermal cleaning and disinfection processes used in food, industrial, domestic and institutional areas using cultural microbiological methods

6.1 Determination of the bactericidal, yeasticidal and fungicidal activity of chemical disinfectants using cultural microbiological methods *

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) *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*
DIN EN 1275 2006-03	Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of basic fungicidal or basic yeasticidal activity of chemical disinfectants and antiseptics - Test method and requirements (phase 1) *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*
DIN EN 1276 2019-11	Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas - Test method and requirements (phase 2, step 1)
DIN EN 1499 2017-10	Chemical disinfectants and antiseptics - Hygienic handwash - Test method and requirements (phase 2/step 2) *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*
DIN EN 1500 2017-10	Chemical disinfectants and antiseptics - Hygienic handrub - Test method and requirements (phase 2/step 2) *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*
DIN EN 1650 2013-08	Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of fungicidal or yeasticidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas - Test method and requirements (phase 2, step 1)

-Translation-

DIN EN 1656 2010-03 Corrigendum 1 2010-11	Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of fungicidal or yeasticidal activity of chemical disinfectants and antiseptics used in the veterinary area - Test method and requirements (phase 2, step 1)
DIN EN 1657 2016-11	Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of fungicidal or yeasticidal activity of chemical disinfectants and antiseptics used in the veterinary area - Test method and requirements (phase 2, step 1)
DIN EN 13697 2015-06	Chemical disinfectants and antiseptics - Quantitative non-porous surface test for the evaluation of bactericidal and/or fungicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas - Test method and requirements without mechanical action (phase 2, step 2)
DIN EN 14349 2013-02	Chemical disinfectants and antiseptics - Quantitative surface test for the evaluation of bactericidal 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)
VAH Method 8 2015-04	Requirements and methods for VAH certification of chemical disinfection processes - Determination of bactericidal and yeasticidal activity in a qualitative suspension test *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*
VAH Method 9 2015-04	Requirements and methods for VAH certification of chemical disinfection processes - Determination of bactericidal, yeasticidal, tuberculocidal and mycobactericidal activity in a quantitative suspension test *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*
VAH Method 14.1 2015-04	Requirements and methods for VAH certification of chemical disinfection processes - Surface disinfection without mechanics - Practical test *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*
VAH Method 14.2 2015-04	Requirements and methods for VAH certification of chemical disinfection processes - Surface disinfection with mechanics - Practical test (4-field test) *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*

-Translation-

VAH Method 15 2015-04	Requirements and methods for VAH certification of chemical disinfection processes - Chemical instrument disinfection - Practical quantitative germ carrier test *(Here: For disinfectants used in food, industrial, domestic and institutional areas)*

6.2 Determination of the hygienic effectiveness of chemical-thermal cleaning processes in commercial dishwashers using cultural microbiological methods *

DIN 10510 Annex C 2013-10	Food hygiene - Commercial dishwashing with multitank-transport dishwashers - Hygiene requirements, procedure testing
DIN 10512 Annex C 2008-06	Food hygiene - Commercial dishwashing with single tank dishwashers - Hygiene requirements, type testing
DIN 10522 Annex C 2006-01	Food hygiene - Commercial cleaning of reusable boxes and reusable containers for unpackaged foodstuffs - Hygiene requirements, testing
DIN SPEC 10534 Section 5 2019-02	Food hygiene - Commercial dishwashing - Hygiene requirements, testing

6.3 Determination of the effectiveness of disinfection processes in cream whipping machines using cultural microbiological methods

DIN 10507 Annex B 2006-11	Food hygiene - Production and dispense of cream with cream whipping machines - Hygiene requirements, testing (*standard withdrawn*)
prDIN EN 16888 Annex C 2015-08	Food processing machinery - Cream whipping machines - Safety and hygiene requirements

7 Analysis of production water in the foodstuffs and cosmetics sector

7.1 Sampling

DIN EN ISO 19458 (K 19) 2006-12	Water quality - Sampling for microbiological analysis

-Translation-

7.2 Determination of bacteria using cultural microbiological methods *

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 Pseudomonas aeruginosa - 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
DIN EN ISO 14189 (K 24) 2016-11	Water quality - Enumeration of Clostridium perfringens - Method using membrane filtration
TrinkwV §15 Absatz (1c)	Determination of colony count at 22 °C and 36 °C
UBA recommendation 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

8 Determination of the appearance, smell, taste and/or texture of foodstuffs, food supplements, feedstuffs, pet food and tobacco products using general and specific sensory tests **

DIN 10964 2014-11	Sensory analysis - Simple descriptive test
DIN EN ISO 5495 2016-10	Sensory analysis - Methodology - Paired comparison test
DIN EN ISO 4120 2007-10	Sensory analysis - Methodology - Triangle test
DIN 10976 2016-08	Sensory analysis - Difference from Control-Test (DfC-Test)

-Translation-

DIN 10973 2013-06	Sensory analysis - In/Out test
DIN ISO 8587 2010-08	Sensory analysis - Methodology - Ranking
DIN EN ISO 13299 2016-06	Sensory analysis - Methodology - General guidance for establishing a sensory profile
Regulation (EC) No 2568/91 Annex XII Last updated 2019	Commission Regulation (EEC) No 2568/91 of 11 July 1991 on the characteristics of olive oil and olive-residue oil and on the relevant methods of analysis - Annex XII Organoleptic assessment of virgin olive oil
SOP M 3379 2018-09	Approach of the installation of QDP for the generation of odor profiles for tobacco samples
SOP M 3642 2019-05	Sensory Evaluation of Harmony in Olive Oil
SOP M 3746 2019-05	Implementation of the degree of difference test (DOD) for virgin olive oils

Abbreviations used:

ADPI	American Dairy Products Institut
AOCS	American Oil Chemists Society
ASU	Amtliche Sammlung von Untersuchungsmethoden (Official Collection of Test Methods) on the basis of § 64 LFGB (German Food and Feed Act)
DGF	Deutsche Gesellschaft für Fettwissenschaft (German Society for Fat Research)
DVG	Deutsche Veterinärmedizinische Gesellschaft (German Veterinary Medicine Society)
ICC-STANDARDS	Standard methods of the International Association for Cereal Science and Technology (ICC)
ICUMSA	International Commission for Uniform Methods of Sugar Analysis
IP	Institute of Petroleum Guidelines
ELISA	Enzyme-Linked-Immuno-Sorbet-Assey
GAFTA	Grain and Feed Trade Association, London
LFGB	Lebensmittel- und Futtermittelgesetzbuch (German Food and Feed Act)
Methodenbuch Volume II	Fertiliser analysis 4th edition 1995, VDLUFA-Verlag, Darmstadt
Methodenbuch Volume III	Chemical analysis of feedstuffs 7th supplement 2007, VDLUFA-Verlag, Darmstadt
Methodenbuch Volume VI	Chemical, physical and microbiological testing methods for milk, milk products and dairy additives (6th supplement 2003, VDLUFA-Verlag, Darmstadt)
O.I.C.C.	Testing methods of the Office International du Cacao et du Chocolat
Ph. Eur.	European Pharmacopoeia
SGS / SOP	In-house method of SGS Germany GmbH
TS	Turkish Standards
UBA	Umweltbundesamt (Federal Environment Agency)
UNECE	United Nations Economic Commission for Europe
VAH	Verbund für Angewandte Hygiene e.V. (Association for Applied Hygiene)
VDLUFA	Verband Deutscher Landwirtschaftlicher Untersuchungs- und Forschungsanstalten (Association of German Agricultural Testing and Research Institutions)

-Translation-