

Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-14082-01-01 according to DIN EN ISO/IEC 17025:2018

Valid from: 20.06.2025

Date of issue: 20.06.2025

This annex is a part of the accreditation certificate D-PL-14082-00.

Holder of partial accreditation certificate:

AGROLAB LUFA GmbH
Dr.-Hell-Straße 6, D-24107 Kiel

with the location

AGROLAB LUFA GmbH
Dr.-Hell-Straße 6, D-24107 Kiel

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de>.

Tests in the fields:

Sensory, physical, physico-chemical, chemical, microbiological, molecular biological and immunological analysis of foodstuffs and feedstuffs

Microbiological, molecular biological and immunological analysis of environmental samples, fitment and utensils in food and feed areas

Flexible scope of accreditation:

Within the test areas indicated, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS

[Flex A] To use standardised or equivalent test methods listed here with different issue dates.

[Flex B] To have the free choice of standardised or equivalent test methods.

[Flex C] To modify, develop or further develop test methods.

The test methods listed are examples. The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation. The list is publicly available on the website of the testing laboratory.

Table of contents

1.1	Sensory analysis of foodstuffs and feedstuffs using simple descriptive tests [Flex C]	5
1.2	Physical, physico-chemical and chemical analysis of foodstuffs and feedstuffs	5
1.2.1	Sample preparation and sample pretreatment [Flex A]	5
1.2.2	Determination of parameters using physical, physico-chemical and chemical analysis [Flex A]	6
1.2.3	Determination of parameters and ingredients by gravimetry in foodstuffs and feedstuffs [Flex C]	6
1.2.4	Determination of parameters and ingredients by titrimetry in foodstuffs and feedstuffs [Flex C]	8
1.2.5	Determination of ingredients and additives by photometry in foodstuffs and feedstuffs [Flex C]	10
1.2.6	Determination of ingredients by polarimetry in foodstuffs and feedstuffs [Flex B]	10
1.2.7	Determination of parameters and ingredients by electrode measurement in foodstuffs and feedstuffs [Flex B]	11
1.2.8	Determination of ingredients by combustion in foodstuffs and feedstuffs [Flex A]	11
1.2.9	Determination of elements by inductively coupled plasma optical emission spectrometry (ICP-OES) in foodstuffs and feedstuffs [Flex B]	11

1.2.10 Determination of elements by inductively coupled plasma mass spectrometry (ICP-MS) in foodstuffs and feedstuffs [Flex B].....	12
1.2.11 Determination of elements by atomic absorption spectrometry (CV-AAS) in foodstuffs and feedstuffs [Flex B]	12
1.2.12 Determination of nitrate by ion chromatography (IC) in foodstuffs [Flex A]	13
1.2.13 Determination of ingredients, additives and residues of pharmacological substances by liquid chromatography (LC) with conventional detectors (DAD, ELSD, FLD, ELCD) in foodstuffs and feedstuffs [Flex C].....	13
1.2.14 Determination of ingredients, plant protection product residues, residues of pharmacologically active substances and organic contaminants by liquid chromatography (LC) with mass selective detectors (MS/MS) in foodstuffs and feedstuffs [Flex C]	17
1.2.15 Determination of ingredients and plant protection product residues by gas chromatography (GC) with conventional detectors (FID, ECD, FPD) in foodstuffs and feedstuffs [Flex C].....	19
1.2.16 Determination of plant protection product residues and contaminants by gas chromatography (GC) with mass selective detectors (MS, MS/MS, HRMS) in foodstuffs and feedstuffs [Flex C].....	19
1.2.17 Determination of mineral oil hydrocarbons by coupled liquid chromatography-gas chromatography (LC-GC) with conventional detector (FID) in foodstuffs and feedstuffs [Flex C]	20
1.3 Microbiological analysis of foodstuffs and feedstuffs	20
1.3.1 Sample preparation and sample pretreatment by dilution for microbiological analysis of foodstuffs and feedstuffs [Flex B]	20
1.3.2 Determination of vitamins using microbiological test systems in foodstuffs and feedstuffs[Flex C].....	21
1.3.3 Determination of bacteria, yeasts and moulds using cultural microbiological methods in foodstuffs and feedstuffs [Flex C].....	21
1.3.4 Identification and typing of bacteria using MALDI-TOF in foodstuffs and feedstuffs	25
[Flex C]	25
1.3.5 Detection of antimicrobial substances using microbiological test systems [Flex A]	26
1.4 Molecular biological analysis of foodstuffs and feedstuffs	26
1.4.1 Analysis of nucleic acids using real-time PCR.....	26
1.4.1.1 Detection of bacteria using real-time PCR in foodstuffs and feedstuffs [Flex C].....	26
1.4.1.2 Detection of animal species using real-time PCR in foodstuffs and feedstuffs [Flex C]	27
1.4.1.3 Detection of allergens and plant species using real-time PCR in foodstuffs and feedstuffs [Flex C]	27
1.4.1.4 Determination of genetically modified plants using real-time PCR in foodstuffs and feedstuffs [Flex C].....	28

1.4.2	Analysis of nucleic acids using multiplex real-time PCR	30
1.4.2.1	Detection of animal species using multiplex real-time PCR in foodstuffs and feedstuffs [Flex C]	30
1.4.2.2	Detection of genetically modified plants using multiplex real-time PCR in foodstuffs and feedstuffs [Flex C]	30
1.4.3	Detection of potato variety by gel electrophoresis	31
1.4.4	Detection of animal species using DNA Sanger sequencing in foodstuffs [Flex C]	31
1.5	Immunological analysis of foodstuffs and feedstuffs	31
1.5.1	Determination of mycotoxins by enzyme immunoassay (ELISA) in foodstuffs and feedstuffs [Flex B]	31
1.5.2	Determination of allergens by enzyme immunoassay (ELISA) in foodstuffs and feedstuffs [Flex B]	32
1.5.3	Determination of residues of pharmacologically active substances and hormones by enzyme immunoassay (ELISA) in milk and powdered milk [Flex B]	34
1.5.4	Identification and typing of bacteria by agglutination [Flex A]	34
2	Analysis of environmental samples, fitment and utensils in food and feed areas	35
2.1	Determination of bacteria, yeasts and moulds using cultural microbiological methods in environmental samples, fitment and utensils in food and feed areas [Flex C]	35
2.2	Detection of Salmonella using real-time PCR [Flex A]	36
2.3	Identification and typing of bacteria using MALDI-TOF in environmental samples, fitment and utensils in food and feed areas [Flex C]	36
2.4	Identification and typing of bacteria by agglutination [Flex A]	36
2.5	Qualitative determination of allergens by enzyme immunoassay (ELISA) in environmental samples, fitment and utensils in food and feed areas [Flex B]	36
2.6	Determination of allergens of plant origin using real-time PCR in environmental samples, fitment and utensils in food and feed areas [Flex C]	39
	Abbreviations used	39

1 Analysis of foodstuffs and feedstuffs

1.1 Sensory analysis of foodstuffs and feedstuffs using simple descriptive tests [Flex C]

DIN ISO 22935-2
2012-12

Milk and milk products – Sensory analysis –
Part 2: Recommended methods for sensory evaluation
(Modification: *Extension to foodstuffs matrix*)

DIN ISO 22935-3
2012-12

Milk and milk products – Sensory analysis – Part 3: Guidance on a
method for evaluation of compliance with product specifications
for sensory properties by scoring
(Modification: *Extension to foodstuffs matrix*)

DIN 10964
2014-11

Sensory analysis – Simple descriptive test
(Modification: *No coding of samples*)

MP-00167-DE
2022-09

Simple descriptive sensory analysis pet food

1.2 Physical, physico-chemical and chemical analysis of foodstuffs and feedstuffs

1.2.1 Sample preparation and sample pretreatment [Flex A]

ISO 14156 IDF 172
2001-12

Milk and milk products – Extraction methods for lipids and
liposoluble compounds
(Modification: *Without drying oven or nitrogen treatment*)

ISO 15884 IDF 182
2002-11

Milk fat – Preparation of fatty acid methyl esters

DIN EN 12393-2
2014-03

Foods of plant origin – Multiresidue methods for the
determination of pesticide residues by GC or LC-MS/MS – Part 2:
Methods for extraction and cleanup
(Modification: *Extension to foodstuffs of animal origin and
feedstuffs matrix*)

DIN EN 13805
2014-12

Foodstuffs – Determination of trace elements – Pressure digestion

DGF C-VI 11a
2016

Fatty acid methyl ester transmethylation with boron trifluoride
(BF₃)
(Modification: *Use also in milk fats, without C4 and C6 fatty acid
determination; transesterification of the entire sample without
prior fat extraction*)

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 5 of 39

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

1.2.2 Determination of parameters using physical, physico-chemical and chemical analysis [Flex A]

DIN 10311 1985-08	Determination of the water dispersion in butter; indicator paper method
DIN 10331 1996-03	Determination of the hardness of butter
VDLUFA III, 25.1 1997	Feedstuff analysis – Net energy lactation/HFT – Determination of net energy lactation (estimation method); gas formation according to Hohenheim feed value test (HFT)
VDLUFA VI, C 12.2 2003	Milk – Density – Determination of density using the pycnometer
VDLUFA VI, C 26.4 1995	Milk – Physical test characteristics of milk and dairy products – Determination of bulk density
OIML R87 2016	Quantity of product in prepackages

1.2.3 Determination of parameters and ingredients by gravimetry in foodstuffs and feedstuffs [Flex C]

Regulation (EC) 152/2009 Annex III, A Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of moisture (Modifications: <i>Single determinations, drying time 4h with vacuum variant, no final drying</i>)
Regulation (EC) 152/2009 Annex III, H Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of crude oils and fats
Regulation (EC) 152/2009 Annex III, I Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of crude fibre

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 6 of 39

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

Regulation (EC) 152/2009 Annex III, M Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of crude ash
Regulation (EC) 152/2009 Annex III, N Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of ash which is insoluble in hydrochloric acid
ISO 6496 1999-08	Animal feeding stuffs – Determination of moisture and other volatile matter content (Modification: <i>Single determination</i>)
ISO 16472 2006-04	Animal feeding stuffs – Determination of amylase-treated neutral detergent fibre content (aNDF)
DIN EN ISO 13906 2008-11	Animal feeding stuffs – Determination of acid detergent fibre (ADF) and acid detergent lignin (ADL) contents
ASU L 00.00-18 1997-01 Corrigendum 2017-10	Determination of total fibre in foodstuffs
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 foodstuffs matrix</i>)
ASU L 06.00-4 2007-04	Analysis of foodstuffs – determination of ash in meat and meat products (Modification: <i>Extension to foodstuffs matrix</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 foodstuffs matrix</i>)
ASU L 17.00-1 2002-12	Determination of loss on drying in bread including small baked products made of bread dough (Modifications: <i>No pre-drying, drying time 4h, extension to foodstuffs matrix</i>)

<p>ASU L 17.00-3 1982-05 Corrigendum 2002-12</p>	<p>Determination of ash in bread including small baked products made of bread dough (Modification: <i>Extension to foodstuffs matrix</i>)</p>
<p>ASU L 17.00-4 2017-10</p>	<p>Determination of total fat content in bread including small baked products made of bread dough after acid digestion by extraction and gravimetry (Modification: <i>Extension to dry foodstuffs matrix</i>)</p>
<p>VDLUFA VI, C 10.2 2000</p>	<p>Milk – Inorganic components – Determination of total ash (Modification: <i>Ashing time 10h</i>)</p>
<p>VDLUFA VI, C 35.3 2020</p>	<p>Milk – Dry matter (water content) – Determination of dry matter: Sea sand method (Modification: <i>Drying time 4h</i>)</p>
<p>CODEX STAN 70 1981</p>	<p>Codex Standard for Canned Tuna And Bonito</p>
<p>CODEX STAN 92 1981</p>	<p>Codex Standard for Quick Frozen Shrimps or Prawns</p>
<p>CODEX STAN 165 1989</p>	<p>Standard for Quick Frozen Blocks of Fish Fillets, Minced Fish Flesh and Mixtures</p>
<p>MP-00166-DE 2022-09</p>	<p>Weight percentages and number of components in foodstuffs and feedstuffs</p>
<p>1.2.4</p>	<p>Determination of parameters and ingredients by titrimetry in foodstuffs and feedstuffs [Flex C]</p>
<p>Regulation (EC) 152/2009 Annex III, C Last amended 27.01.2009</p>	<p>Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of the content of crude protein</p>
<p>Regulation (EC) 152/2009 Annex III, J Last amended 27.01.2009</p>	<p>Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of sugar</p>

Regulation (EC) 152/2009 Annex III, K Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of lactose
Regulation (EC) 152/2009 Annex III, Q Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of chlorine from chlorides
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 foodstuffs matrix</i>)
ASU L 13.00-37 2018-06	Animal and vegetable fats and oils – Determination of peroxide value – Iodometric (visual) endpoint determination
ASU L 17.00-6 1988-12	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 foodstuffs matrix</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 foodstuffs matrix</i>)
VDLUFA III, 7.2.6 2012	Feedstuff analysis – Degree of starch breakdown – Determination of the degree of starch breakdown
VDLUFA VI, C 8.3 2000	Milk and milk product acidity – Determination of the acidity of milk and liquid milk products
MP-02707-DE 2021-03	Determination of the peroxide value in foodstuffs and feedstuffs after cold extraction

1.2.5 Determination of ingredients and additives by photometry in foodstuffs and feedstuffs [Flex C]

DIN EN 12014-3 2005-08	Foodstuffs – Determination of nitrate and/or nitrite content – Part 3: Spectrometric determination of nitrate and nitrite content of meat products after enzymatic reduction of nitrate to nitrite (Modification: <i>Extension to foodstuffs and feedstuffs of animal origin matrix, clarification of sample extracts by centrifugation/filtration</i>)
ASU L 00.00-94 2006-09	Analysis of foodstuffs – Determination of inulin in foods – Enzymatic method
ASU L 06.00-8 2017-10	Analysis of foodstuffs – Determination of hydroxyproline content in meat and meat products – Photometric method after acid digestion
ASU L 17.00-7 1983-11	Determination of lactose in bread including small baked products made of bread dough (Modification: <i>Extension to foodstuffs matrix</i>)
VDLUFA III, 12.3.1 1988	Feedstuffs – Plant pigments – Determination of added and natural carotenoids in compound feed (Modification: <i>Extension to food supplements matrix for lutein</i>)
VDLUFA III, 13.6.1 1983	Feedstuffs – Vitamins and similar active ingredients – Determination of choline (Modification: <i>Determination from the aqueous extract</i>)
MP-02708-DE 2022-09	Photometric determination of nitrite and nitrate in foodstuffs and feedstuffs after enzymatic reduction

1.2.6 Determination of ingredients by polarimetry in foodstuffs and feedstuffs [Flex B]

Regulation (EC) 152/2009, Annex III, L Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of starch
ASU L 17.00-5 2003-12	Analysis of foodstuffs – Determination of starch content in bread including small baked products made of bread dough

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 10 of 39

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

1.2.7 Determination of parameters and ingredients by electrode measurement in foodstuffs and feedstuffs [Flex B]

DIN EN 16279 2012-09	Animal feeding stuffs – Determination of fluoride content after hydrochloric acid treatment by ion-sensitive electrode method (ISE)
ASU L 06.00-2 1980-09	Measurement of pH in meat and meat products
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 49.00-7 2000-07	Analysis of foodstuffs – Determination of fluoride in dietary foods with the ion-sensitive electrode (Modification: <i>Extension to foodstuffs matrix</i>)
VDLUFA VI, C 8.2 2000	Milk – Acidity – Determination of the pH value in milk and milk products
VDLUFA III, 18.1 1976	Feedstuffs – Analysis of silage – Determination of pH value (Modification: <i>Extension to feedstuffs matrix</i>)

1.2.8 Determination of ingredients by combustion in foodstuffs and feedstuffs [Flex A]

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 (Modification: <i>Use of argon as carrier gas</i>)
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1.2.9 Determination of elements by inductively coupled plasma optical emission spectrometry (ICP-OES) in foodstuffs and feedstuffs [Flex B]

DIN EN 15621 2017-10	Animal feeding stuffs – Determination of calcium, sodium, phosphorus, magnesium, potassium, sulphur, iron, zinc, copper, manganese and cobalt after pressure digestion by ICP-AES (Modification: <i>Extension for boron, reduction of the method for cobalt, digestion of premixes with aqua regia in the Odlab system</i>)
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DIN EN 16943 2017-07	Foodstuffs – Determination of calcium, copper, iron, magnesium, manganese, phosphorus, potassium, sodium, sulphur and zinc by ICP-OES (Modification: <i>Digestion of premixes with aqua regia in the Odlab system, no use of hydrochloric acid for standard production</i>)
1.2.10 Determination of elements by inductively coupled plasma mass spectrometry (ICP-MS) in foodstuffs and feedstuffs [Flex B]	
DIN EN 15111 2007-06	Foodstuffs – Determination of trace elements – Determination of iodine by ICP-MS (inductively coupled plasma mass spectrometry)
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: <i>Extension for the following elements: Al, Co, Cr, Mo, Ni, Sb, Se, Sn, Ti, U, V, Cu, Mn, reduction of method for Hg</i>)
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
DIN EN 17050 2017-11	Animal feeding stuffs – Methods of sampling and analysis – Determination of iodine in animal feed by ICP-MS
DIN EN 17053 2018-03	Animal feeding stuffs – Methods of sampling and analysis – Determination of trace elements, heavy metals and other elements in feed by ICP-MS (multi-method) (Modification: <i>Extension for Al, Cr, Ni, Sb, Sn and V, reduction of method for Hg</i>)
1.2.11 Determination of elements by atomic absorption spectrometry (CV-AAS) in foodstuffs and feedstuffs [Flex B]	
DIN EN 13806 2002-11	Foodstuffs – Determination of trace elements – Determination of mercury by cold-vapour atomic absorption spectrometry (CVAAS) after pressure digestion
DIN EN 16277 2012-09	Animal feeding stuffs – Determination of mercury by cold-vapour atomic absorption spectrometry (CVAAS) after microwave pressure digestion (extraction with 65% nitric acid and 30% hydrogen peroxide) (Modification: <i>Without hydrogen peroxide</i>)

1.2.12 Determination of nitrate by ion chromatography (IC) in foodstuffs [Flex A]

DIN EN 12014-2 2018-02	Foodstuffs – Determination of nitrate and/or nitrite content – Part 2: HPLC/IC method for the determination of nitrate content of vegetables and vegetable products (Modification: <i>Extraction at 70 °C</i>)
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1.2.13 Determination of ingredients, additives and residues of pharmacological substances by liquid chromatography (LC) with conventional detectors (DAD, ELSD, FLD, ELCD) in foodstuffs and feedstuffs [Flex C]

Regulation (EC) 152/2009 Annex III, F Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of amino acids (except tryptophane) (Modification: <i>Extension to infant formula and dietary food</i>)
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Regulation (EC) 152/2009 Annex III, G Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of tryptophan (Modification: <i>Extension to foodstuffs matrix</i>)
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Regulation (EC) 152/2009 Annex IV, A Last amended 27.01.2009	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of vitamin A (Modification: <i>Extension to foodstuffs matrix, saponification without addition of Na₂S, single extraction of a defined aliquot of the saponification preparation in 15 ml petroleum spirit, optional sample grinding</i>)
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<p>Regulation (EC) 152/2009 Annex IV, B Last amended 27.01.2009</p>	<p>Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of vitamin E <i>(Modification: Extension to feedstuffs matrix, saponification without addition of Na₂S, single extraction of a defined aliquot of the saponification preparation in 15 ml petroleum spirit, optional sample grinding)</i></p>
<p>DIN EN ISO 9167 2020-03</p>	<p>Rapeseed and rapeseed meals – Determination of glucosinolates content – Method using high-performance liquid chromatography <i>(Modification: Extraction with 70% methanol)</i></p>
<p>DIN EN 12821 2009-08</p>	<p>Foodstuffs – Determination of vitamin D by high performance liquid chromatography – Measurement of cholecalciferol (D₃) or ergocalciferol (D₂) <i>(Modification: Saponification without addition of Na₂S, single extraction of a defined aliquot of the saponification preparation in 15 ml petroleum spirit, optional sample grinding)</i></p>
<p>DIN EN 12822 2014-08</p>	<p>Foodstuffs – Determination of vitamin E by high performance liquid chromatography – Measurement of α-, β-, γ- and δ-tocopherols <i>(Modification: Extension to feedstuffs matrix, single extraction of a defined aliquot of the saponification preparation in 15 ml petroleum spirit/diethyl ether (80:20))</i></p>
<p>DIN EN 12823-2 2000-07</p>	<p>Foodstuffs – Determination of vitamin A by high performance liquid chromatography – Part 2: Measurement of β-carotene <i>(Modification: Extension to feedstuffs matrix, single extraction)</i></p>
<p>DIN EN 14122 2014-08</p>	<p>Foodstuffs – Determination of vitamin B₁ by high performance liquid chromatography <i>(Modification: Extension to feedstuffs matrix, reduced autoclaving time)</i></p>
<p>DIN EN 14152 2014-08</p>	<p>Foodstuffs – Determination of vitamin B₂ by high performance liquid chromatography <i>(Modification: Extension to feedstuffs matrix, reduced autoclaving time)</i></p>
<p>DIN EN 14663 2006-03</p>	<p>Foodstuffs – Determination of vitamin B₆ (including glucosidic bound compounds) with HPLC <i>(Modification: Extension to feedstuffs matrix, reduced autoclaving time)</i></p>

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 14 of 39

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

DIN EN 15086 2006-06	Foodstuffs – Determination of isomalt, lactitol, maltitol, mannitol, sorbitol and xylitol in foodstuffs (Modification: <i>Use of a light scattering detector (ELSD), use of a HILIC HPLC column, no determination of isomalt</i>)
DIN 10758 1997-05	Analysis of honey – Determination of the content of saccharides fructose, glucose, sucrose, turanose and maltose – HPLC method (Modification: <i>Extension to foodstuffs and feedstuffs matrix; use of a light scattering detector (ELSD), use of a HILIC HPLC column, no determination of turanose, extension of the method for lactose</i>)
AOAC 999.12 2003	Taurine in pet food
ASU L 18.00-16 1999-11	Analysis of foodstuffs – Determination of theobromine and caffeine in pastries (Modification: <i>Extension to foodstuffs and feedstuffs matrix</i>)
VDLUFA III, 4.11.5 1997	Feedstuffs – Nitrogen compounds – Determination of methionine in feedstuffs with high chloride content
VDLUFA III, 13.8.1 1997	Feedstuff analysis – Vitamin D3 – Determination of vitamin D3; HPLC procedure (Modification: <i>Saponification without addition of Na₂S, single extraction of a defined aliquot of the saponification preparation in 15 ml petroleum spirit, optional sample grinding</i>)
VDLUFA III, 13.9.1 2006	Feedstuffs – Vitamins and similar active ingredients – Determination of water-soluble B vitamins, nicotinic acid and nicotinamide by HPLC method (Modification: <i>Extension to foodstuffs matrix, additional determination of riboflavin-5'-phosphate, no determination of nicotinic acid, analysis of vitamin B1, B2, B6 up to 100mg/100g in mineral-poor matrices by hot extraction</i>)
VDLUFA III, 14.22.1 2006	Feedstuffs – Coccidiostats and other additives – Determination of monensin sodium (HPLC method) (Modification: <i>Extension to determination of lasalocid, narasin and maduramycin</i>)
VDLUFA III, 14.23.1 2006	Feedstuffs – Coccidiostats and other additives – Determination of salinomycin sodium (HPLC method)
MP-00191-DE 2017-12	Determination of menadione (vitamin K ₃) in feedstuffs; HPLC method

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 15 of 39

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

MP-00192-DE 2020-08	Determination of vitamin K ₁ (phylloquinone); HPLC method with post-column derivatisation
MP-00231-DE 2021-01	Determination of preservatives in foodstuffs by HPLC
MP-00240-DE 2022-08	Determination of taurine in selected foodstuffs and beverages by HPLC
MP-00244-DE 2021-02	Determination of coumarin in food samples by HPLC-UV
MP-00247-DE 2021-01	Determination of nicarbazin in feedstuffs, premixes and high concentrates by HPLC
MP-01280-DE 2021-02	Determination of ethoxyquin, propyl gallate, butylated hydroxyanisole (BHA) and butylated hydroxytoluene (BHT) by HPLC
MP-01308-DE 2022-08	Determination of betaine and carnitine in concentrates by HPLC
MP-01372-DE 2022-09	Chromatographic determination of vitamin D ₂ , D ₃ and 25-OH-D ₃ in foodstuffs and feedstuffs and ergosterol in foodstuffs
MP-01373-DE 2017-12	Determination of vitamin E acetate in feedstuffs and foodstuffs, HPLC method
MP-01375-DE 2018-02	Determination of vitamin C (ascorbic acid) in foodstuffs and feedstuffs, HPLC method
MP-02428-DE 2022-09	Determination of vitamin D ₃ and D ₂ in high concentrates and 25-hydroxy vitamin D ₃ (precursor of the biologically active vitamin D ₃ form (calcitriol)) in premixes, HPLC method
MP-02570-DE 2021-12	Determination of tocopherol isomer mixtures in concentrates, HPLC method

1.2.14 Determination of ingredients, plant protection product residues, residues of pharmacologically active substances and organic contaminants by liquid chromatography (LC) with mass selective detectors (MS/MS) in foodstuffs and feedstuffs [Flex C]

EN 15662 2018-05	Foods of plant origin – Multimethod for the determination of pesticide residues using GC- and LC-based analysis following acetonitrile extraction/partitioning and cleanup by dispersive SPE – Modular QuEChERS-method (Modification: <i>Extension to foodstuffs of animal origin and feedstuffs matrix</i>)
DIN EN 15055 2006-08	Non-fatty foods – Determination of chlormequat and mepiquat – LC-MS/MS method (Modification: <i>Extension to foodstuffs and feedstuffs matrix, 60 min extraction by shaking</i>)
ASU L 15.01/02-5 2012-01	Analysis of foodstuffs – Determination of ergot alkaloids in rye and wheat – HPLC method with cleanup on a basic aluminium oxide solid phase (Modification: <i>Extension to cereals and cereal products matrix, no cleanup of extracts, measurement with LC-MS/MS</i>)
MP-00180-DE 2022-03	Determination of selected mycotoxins by HPLC-MS/MS
MP-00182-DE 2021-01	Determination of chloramphenicol, ivermectin and benzimidazoles by HPLC-MS/MS (acetonitrile extraction)
MP-00225-DE 2021-01	Determination of polar pesticides in foodstuffs and feedstuffs (HPLC-MS/MS method)
MP-00234-DE 2020-08	Determination of melamine and cyanuric acid in foodstuffs and feedstuffs by HPLC-MS/MS
MP-00237-DE 2022-08	Determination of acrylamide in foodstuffs and feedstuffs – HPLC-MS/MS method
MP-00238-DE 2020-06	Determination of selected antibiotics in foodstuffs and feedstuffs by HPLC-MS/MS (buffer extraction)
MP-00242-DE 2022-08	Determination of polypeptides in feedstuffs by HPLC-MS/MS (acid extraction)
MP-00245-DE 2020-12	Determination of fumonisins (mycotoxins) by HPLC-MS/MS method

Valid from: 20.06.2025

Date of issue: 20.06.2025

MP-01306-DE 2019-12	Determination of patulin in fruit and fruit preparations by LC-MS/MS
MP-01309-DE 2021-03	Determination of total folate content in foodstuffs, LC-MS/MS method
MP-01372-DE 2022-09	Chromatographic determination of vitamin D ₂ , D ₃ and 25-OH-D ₃ in foodstuffs and feedstuffs and ergosterol in foodstuffs
MP-02089-DE 2020-10	Determination of aflatoxin M1 in milk and milk products by LC-MS/MS
MP-02090-DE 2021-03	Determination of sugars (residues and low levels) in selected foodstuffs by LC-MS/MS
MP-02177-DE 2020-12	Determination of diquat and paraquat in plant-based foodstuffs and feedstuffs by LC/MS-MS
MP-02196-DE 2020-02	Determination of nicotine in foodstuff and feedstuff samples by LC-MS/MS
MP-02331-DE 2022-09	Determination of PTU and ETU in foodstuffs and feedstuffs by LC-MS/MS
MP-02601-DE 2021-03	Determination of purines in dry and wet feed by LC-MS/MS
MP-02602-DE 2021-03	Determination of pyrrolizidine alkaloids and tropane alkaloids in plant material by LC-MS/MS
MP-02998-DE 2022-09	Determination of residues of selected lactam antibiotics in foodstuffs of animal origin by HPLC-MS/MS
MP-03063-DE 2024-05	Determination of residues of selected aminoglycoside antibiotics in foodstuffs and feedstuffs by HPLC-MS/MS (Restriction: <i>Here only for feedstuffs</i>)
MP-03096-DE 2022-09	Determination of glycoalkaloids (solanine, chaconine) in foodstuffs and feedstuffs by LC-MS/MS
MP-03124-DE 2022-09	Determination of total carnitine in foodstuffs and feedstuffs by LC-MS/MS
MP-03126-DE 2022-08	Determination of Alternaria toxins in plant products by HPLC-MS/MS

MP-03285-DE 2023-10	Determination of residues of per- and polyfluoroalkyl substances (PFAS) in foodstuffs and feedstuffs by HPLC-MS/MS
1.2.15	Determination of ingredients and plant protection product residues by gas chromatography (GC) with conventional detectors (FID, ECD, FPD) in foodstuffs and feedstuffs [Flex C]
ISO 15885 IDF 184 2002-11	Milk fat – Determination of the fatty acid composition by gas-liquid chromatography (Modification: <i>Result correction by response factor</i>)
DIN EN 12393-3 2014-01	Foods of plant origin – Multiresidue methods for the determination of pesticide residues by GC or LC-MS/MS – Part 3: Determination and confirmatory tests (Modification: <i>Extension to foodstuffs and feedstuffs matrix</i>)
ASU L 05.00-16 2014-08	Analysis of foodstuffs – Determination of cholesterol content in eggs and egg products – Gas chromatographic method (Modification: <i>Extension to foodstuffs matrix</i>)
DGF C-VI 10a 2016	Gas chromatography: Analysis of fatty acids and fatty acid distribution (Modification: <i>Use also in milk fats, without C4 and C6 fatty acid determination</i>)
1.2.16	Determination of plant protection product residues and contaminants by gas chromatography (GC) with mass selective detectors (MS, MS/MS, HRMS) in foodstuffs and feedstuffs [Flex C]
EN 15662 2018-05	Foods of plant origin – Multimethod for the determination of pesticide residues using GC- and LC-based analysis following acetonitrile extraction/partitioning and cleanup by dispersive SPE – Modular QuEChERS-method (Modification: <i>Extension to foodstuffs of animal origin and feedstuffs matrix</i>)
DIN EN 13191-2 2000-10	Non-fatty foods – Determination of bromide residues – Part 2: Determination of inorganic bromide (Modification: <i>Measurement by GC-MS</i>)
DIN EN 12393-3 2014-01	Foods of plant origin – Multiresidue methods for the determination of pesticide residues by GC or LC-MS/MS – Part 3: Determination and confirmatory tests (Modification: <i>Extension to foodstuffs and feedstuffs matrix</i>)

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 19 of 39

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

DIN EN 12396-2 1998-12	Non-fatty foods – Determination of dithiocarbamate and thiuram disulfide residues – Part 2: Gas chromatographic method (Modification: <i>Measurement by GC-MS, extension to low-fat feedstuffs matrix, lower sample weight</i>)
DIN EN 16215 2012-07	Animal feeding stuffs – Determination of dioxins and dioxin-like PCBs by GC/HRMS and of indicator PCBs by GC/HRMS (Modification: <i>Extension to foodstuffs matrix; measurement also by GC-MS/MS</i>)
VDLUFA VII, 3.3.3.2 2011	Environmental analysis – Organic analysis – Polycyclic aromatic hydrocarbons (PAH) – Determination of polycyclic aromatic hydrocarbons (PAH) in plant material (Modification: <i>Extension to foodstuffs and feedstuffs matrix; measurement by GC-MS/MS; modified composition of extraction solvent; no cleanup on silica gel and Sephadex</i>)
MP-00183-DE 2021-03	Determination of volatile organic compounds (BTEX, VOC, hexane, hexanal, furan) in foodstuffs and feedstuffs by headspace GC-MS
MP-02840-DE 2021-10	Determination of ethylene oxide and 2-chloroethanol in foodstuffs and feedstuffs by GC-MS/MS
1.2.17	Determination of mineral oil hydrocarbons by coupled liquid chromatography-gas chromatography (LC-GC) with conventional detector (FID) in foodstuffs and feedstuffs [Flex C]
MP-03458-DE 2024-04	Determination of mineral oil hydrocarbons (MOSH, MOAH) in foodstuffs and feedstuffs by LC-GC-FID
1.3	Microbiological analysis of foodstuffs and feedstuffs
1.3.1	Sample preparation and sample pretreatment by dilution for microbiological analysis of foodstuffs and feedstuffs [Flex B]
DIN EN ISO 6887-2 2017-07	Microbiology of food and animal feeding stuffs – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – Part 2: Specific rules for the preparation of meat and meat products

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
1.3.2 Determination of vitamins using microbiological test systems in foodstuffs and feedstuffs [Flex C]	
DIN EN 14131 2003-09	Foodstuffs – Determination of folate by microbiological assay (Modification: <i>Adaptation of the enzyme treatment process step; additional determination of free folate, extension to feedstuffs matrix feeds</i>)
USP 21 Method 88 1986	Biological Tests and Assays – Biotin Assay (determination of the microbiological activity of biotin) (Modification: <i>Hydrolytic release of bound biotin</i>)
USP 34 Method 441 2011	Niacin or Niacinamide Assay (determination of the microbiological activity of niacin and niacinamide) (Modification: <i>Extraction with HCl in pressure cooker</i>)
USP 39 Method 91 2016	Biological Tests and Assays – Calcium Pantothenate Assay (determination of calcium D-pantothenate) (Modification: <i>Fermentative release of bound pantothenic acid</i>)
USP 39 Method 171 2016	Biological Test and Assays – Vitamin B ₁₂ Activity Assay (determination of the microbiological activity of vitamin B ₁₂) (Modification: <i>The concentration of sodium sulphite in the extraction solution is not adjusted to the sample weight</i>)
MP-00171-DE 2023-01	Determination of the microbiological activity of choline in foodstuffs and feedstuffs
MP-02147-DE 2023-01	Microbiological determination of inositol in foodstuffs and feedstuffs
1.3.3 Determination of bacteria, yeasts and moulds using cultural microbiological methods in foodstuffs and feedstuffs [Flex C]	
ISO 4831 2006-08	Microbiology – Horizontal method for the detection and enumeration of coliforms – MPN technique

ISO 4832 2006-02	Microbiology – Horizontal method for the enumeration of coliforms – Colony-count technique
ISO 6579-1 2017-02	Microbiology of the food chain – Horizontal method for the detection, enumeration and serotyping of salmonella – Part 1: Detection of <i>Salmonella</i> spp.
ISO 6611 2004-10	Milk and milk products – Enumeration of colony-forming units of yeasts and/or moulds – Colony-count technique at 25 degrees C (Modification: <i>Extension to bakery products, tea, herbs and spices, fruit and fruit products</i>)
ISO 7251 2005-02	Microbiology of food and animal feeding stuffs – Horizontal method for the detection and enumeration of presumptive <i>Escherichia coli</i> -- Most probable number technique
ISO 10272-2 2017-06	Microbiology of the food chain – Horizontal method for the detection and enumeration of <i>Campylobacter</i> spp. – Part 2: Colony-count technique
ISO 15213 2003-05	Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of sulfite-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 e enumeration of yeasts and moulds – Part 1: Colony count technique in products with water activity greater than 0.95
ISO 21527-2 2008-07	Horizontal method for e enumeration of yeasts and moulds – Part 2: Colony count technique in products with water activity equal to or less than 0.95
ISO 21528-1 2017-06	Microbiology of the food chain – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 1: Detection of Enterobacteriaceae
ISO 21871 2006-01	Microbiology of food and animal feeding stuffs – Horizontal method for the determination of low numbers of presumptive <i>Bacillus cereus</i> – Most probable number technique and detection method (Modification: <i>Instead of MYP agar, BACARA agar is used for confirmation</i>)

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 22 of 39

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

DIN EN ISO 4833-1 2013-12	Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony-count technique at 30 degrees C by the pour plate technique (Modification for enumeration of thermophilic microorganisms: <i>Incubation at 55 °C</i>)
DIN EN ISO 4833-2 2022-05	Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 °C by the surface plating technique
DIN EN ISO 6888-1 2022-06	Microbiology of the food chain – Horizontal method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) – Part 1: Method using Baird-Parker agar medium
DIN EN ISO 6888-3 2005-07	Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) – Part 3: Detection and MPN technique for low numbers (Modification: <i>Confirmation of the coagulase reaction with Baird Parker Rabbit Plasma Fibrinogen Agar</i>)
DIN EN ISO 7937 2004-11	Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of <i>Clostridium perfringens</i> – Colony-count technique
DIN EN ISO 13720 2010-12	Meat and meat products – Enumeration of presumptive <i>Pseudomonas</i> spp.
DIN EN ISO 16649-3 2018-01	Microbiology of the food chain – Horizontal method for the enumeration of beta-glucuronidase-positive <i>Escherichia coli</i> – Part 3: Detection and most probable number technique using 5-bromo-4-chloro-3-indolyl- β -D-glucuronide
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 (Modification: <i>Confirmation of culture-typical colonies using MALDI-TOF, Bruker Daltonic BDAL/11897 MSPS database, 2023</i>)
DIN ISO 16649-2 2020-12	Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of β -glucuronidase-positive <i>Escherichia coli</i> – Part 2: Colony count technique at 44 °C using 5-bromo-4-chloro-3-indolyl β -D-glucuronide

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 23 of 39

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

VDLUFA III, 28.1.2 2012	Feedstuffs – Microbiological methods – Determination of the germ content of bacteria, yeasts, moulds and black fungi
VDLUFA III, 28.1.3 2012	Feedstuffs – Microbiological methods – Procedures for the identification of bacteria, yeasts, moulds and black fungi as indicator germs typical of a product or indicating spoilage
VDLUFA VI, M 7.8.2 1993	Milk – Microbiological test methods – Methods for the detection and identification of specific germ groups – Enterococci – Determination of enterococci; colony-count technique with kanamycin-aesculin-azide agar
VDLUFA VI, M 7.12.2 1993	Milk – Microbiological test methods – Methods for the detection and determination of specific germ groups – Pseudomonads (Pseudomonas) – Determination of pseudomonads: Colony-count technique with C-F-C-selective agar
VDLUFA VI, M 7.13 1996	Milk – Microbiological test methods – Methods for the detection and determination of specific germ groups – Determination of thermoduric (thermoreistant) microorganisms
VDLUFA VI, M 7.17.2 1993	Milk – Microbiological test methods – Methods for the detection and determination of specific germ groups – Spore-forming, aerobic – Determination of spores of aerobic spore formers (<i>Bacillus</i>) (Modification: <i>Extension to foodstuffs matrix; use of plate count agar (PCA)</i>)
VDLUFA VI, M 7.18.2.1 1996	Milk – Microbiological test methods – Methods for the detection and determination of specific germ groups – Detection of anaerobic spore formers (<i>Clostridium</i>) – Detection of anaerobic spore formers (<i>Clostridium</i>): RCM agar method (Modification: <i>Extension to foodstuffs and feed additives matrix</i>)
ICUMSA GS2/3-41 2011	The Determination of the Total Mesophilic Bacterial Count in Refined Sugar Products by the Pour Plate Method or the Membrane Filtration Method (Modification: <i>Use of buffered peptone water for initial dilution; analysis as single analysis; increased count limit per plate, no membrane filtration</i>)

ICUMSA GS2/3-47 2015	The Determination of Yeasts and Moulds in Refined Sugar Products by the Pour Plate Method or the Membrane Filter Method (Modification: <i>Use of buffered peptone water for initial dilution; analysis as single analysis; increased count limit per plate, no membrane filtration, no low germ levels < 10 CFU</i>)
bioMérieux BACARA™ 049969-1 2018-09	Enumeration of presumptive <i>Bacillus cereus</i>
Nordisk Metodikkomitté för Livsmedel. NMKL No. 71, 5. Ed., 1999	Detection of <i>Salmonella</i> spp. in foodstuffs (<i>Salmonella. Påvisning i livsmedel</i>) (Modification: <i>Extension to feedstuffs matrix, confirmation using MALDI-TOF, Bruker Daltonic BDAL/11897 MSPS database, 2023</i>)
Nordisk Metodikkomitté för Livsmedel. NMKL No. 86, 5. Ed., 2013	Determination of aerobic microorganisms in foodstuffs (<i>Aerobe mikroorganismer. Bestemmelse i næringsmidler</i>) (Modification: <i>Extension to feedstuffs matrix</i>)
MP-00109-DE 2023-01	Determination of spores of <i>Bacillus</i> spp. and other aerobic spore formers in feedstuffs
MP-01152-DE 2021-07	Culture detection method for <i>Cronobacter</i> spp. and in particular <i>Cronobacter sakazakii</i> using Rapid' <i>Sakazakii</i> Agar® in foodstuffs and environmental samples
MP-02380-DE 2020-10	Detection of <i>Listeria</i> spp. and <i>L. monocytogenes</i> and quantification of <i>L. monocytogenes</i> using RAPID' <i>L.mono</i> Agar® in food and environmental samples
MP-02642-DE 2023-01	Enumeration of <i>Pseudomonas</i> spp. and <i>Aeromonas</i> spp. in ready meals, fishery products and environmental controls
1.3.4 Identification and typing of bacteria using MALDI-TOF in foodstuffs and feedstuffs [Flex C]	
AOAC 2017.10 2017	Confirmation and identification of <i>Listeria monocytogenes</i> , <i>Listeria</i> species and other gram-positive organisms

MP-01115-DE 2023-01	Identification of bacteria using MALDI-TOF (Bruker Daltonic BDAL/11897 MSPS database, 2023) (Restriction: <i>Here for gram-negative bacteria</i>)
1.3.5 Detection of antimicrobial substances using microbiological test systems [Flex A]	
DSM Food Specialities B. V. Delvotest® T 28/02-02/12 2014-12	Standard diffusion test for detection of antibacterial substances in milk
1.4 Molecular biological analysis of foodstuffs and feedstuffs	
1.4.1 Analysis of nucleic acids using real-time PCR	
1.4.1.1 Detection of bacteria using real-time PCR in foodstuffs and feedstuffs [Flex C]	
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 <i>Escherichia coli</i> (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 <i>Salmonella</i> in foodstuffs. Real-time PCR method (Modification: <i>Extension to feedstuffs matrix</i>)
MP-00158-DE 2021-08	Detection of <i>Clostridium estertheticum</i> and <i>Clostridium estertheticum</i> -like bacteria in meat juice using real-time PCR
MP-01236-DE 2022-03	Analysis of foodstuffs and feedstuffs for the presence of <i>Listeria monocytogenes</i> using real-time PCR
MP-01539-DE 2022-12	Analysis of the presence of the most important virulence genes and the reproductive viability of Shiga toxin-producing <i>Escherichia coli</i> (STEC, VTEC) using real-time PCR
MP-01540-DE 2022-07	Analysis of foodstuffs and feedstuffs for the presence of various pathogenic bacteria using real-time PCR

1.4.1.2 Detection of animal species using real-time PCR in foodstuffs and feedstuffs
[Flex C]

EURL-AP recommended protocol 2013-02	Detection of horse DNA using real-time PCR
EURL-AP SOP 2021-05	Detection of ruminant DNA in feed using real-time PCR
EURL-AP SOP 2021-09	Detection of pig DNA in feed using real-time PCR
EURL-AP SOP 2022-07	Detection of poultry (chicken and turkey) DNA in feed using real-time PCR
MP-00160-DE 2024-05	Analysis for the presence of specific ovine and caprine DNA in foodstuffs and feedstuffs using real-time PCR
MP-02523-DE 2021-08	Detection of ostrich DNA in foodstuffs and feedstuffs using real-time PCR
MP-02524-DE 2021-08	Detection of pheasant DNA in foodstuffs and feedstuffs using real-time PCR
MP-02594-DE 2021-08	Detection of kangaroo DNA in foodstuffs and feedstuffs using real-time PCR
MP-02679-DE 2022-06	Detection of different fish species using real-time PCR

1.4.1.3 Detection of allergens and plant species using real-time PCR in foodstuffs and feedstuffs
[Flex C]

DIN EN 15634-2 2019-12	Analysis of foodstuffs – Detection of a specific DNA sequence from celery (<i>Apium graveolens</i>) in cooked sausages using real-time PCR (Modification: <i>DNA extraction is carried out with the Maxwell RSC machine and the AS1600 kit</i>)
MP-01541-DE 2023-03	Analysis of foodstuffs and environmental samples for the presence of celery DNA using real-time PCR
MP-02378-DE 2022-03	Determination of the soy content in feedstuffs using real-time PCR

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 27 of 39

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

MP-03136-DE 2022-06	Detection of wasabi DNA in foodstuffs using real-time PCR
MP-03457-DE 2023-11	Analysis of foodstuffs and environmental samples for the presence of mustard DNA using real-time PCR
1.4.1.4	Determination of genetically modified plants using real-time PCR in foodstuffs and feedstuffs [Flex C]
ASU G 30.40-17 2017-10	Detection of cauliflower mosaic virus DNA (ORF V) in plant material using real-time PCR – Element-specific method
MP-00212-DE 2022-12	Quantification of Roundup Ready soy (event 40-3-2) in food using quantitative real-time PCR
MP-00213-DE 2022-10	Quantification of the rapeseed GMO event GT73/RT73 in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00214-DE 2022-12	Quantification of A2704-12 soy in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00215-DE 2022-12	Quantification of RR2Yield soy (event MON89788) in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00216-DE 2022-11	Quantification of the rapeseed GMO event T45 in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00217-DE 2022-11	Quantification of the rapeseed GMO event Ms8 in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00218-DE 2022-10	Quantification of the rapeseed GMO event Rf3 in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00219-DE 2022-11	Quantification of the maize GMO event MON810 in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00220-DE 2022-11	Quantification of the maize GMO event NK603 in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00222-DE 2022-11	Quantification of the maize GMO event MON89034 in foodstuffs and feedstuffs using quantitative real-time PCR

MP-00223-DE 2022-12	Quantification of A5547-127 soy in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00881-DE 2022-12	Quantification of MON87701 soy in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00934-DE 2022-11	Quantification of the maize GMO event TC1507 in foodstuffs and feedstuffs using quantitative real-time PCR
MP-00250-DE 2023-01	Detection of a genetically modified DNA sequence Cry1a(c)-T-NOS in foodstuffs and feedstuffs using real-time PCR
MP-00251-DE 2023-01	Detection of a genetically modified linseed DNA sequence in foodstuffs and feedstuffs using real-time PCR
MP-02590-DE 2023-01	Quantification of the soy GMO event CV127 in foodstuffs and feedstuffs using real-time PCR
MP-02667-DE 2023-06	Quantification of the maize GMO event Mir162 in foodstuffs and feedstuffs using real-time PCR
MP-02669-DE 2021-05	Quantification of the maize GMO event DAS-40278 in foodstuffs and feedstuffs using real-time PCR
MP-02794-DE 2021-09	Quantification of the sugar beet GMO event H7-1 in foodstuffs and feedstuffs using real-time PCR
MP-02795-DE 2021-10	Quantification of the soy GMO event SYHT0H2 in foodstuffs and feedstuffs using real-time PCR
MP-02861-DE 2021-10	Screening of foodstuffs and feedstuffs for Arabidopsis thaliana SSU promoter (pSSuAra) DNA sequences using real-time PCR
MP-02862-DE 2021-11	Screening of foodstuffs and feedstuffs for pea E9 terminator (tE9) and pea DNA sequences using real-time PCR
MP-03010-DE 2022-03	Quantification of the maize GMO event MZHG0JG in foodstuffs and feedstuffs using real-time PCR
MP-03011-DE 2022-09	Quantification of the rapeseed GMO event MON88302 in foodstuffs and feedstuffs using real-time PCR

1.4.2 Analysis of nucleic acids using multiplex real-time PCR

1.4.2.1 Detection of animal species using multiplex real-time PCR in foodstuffs and feedstuffs [Flex C]

MP-02432-DE 2021-08	Detection of brown hare and rabbit DNA in foodstuffs and feedstuffs using duplex real-time PCR
MP-02619-DE 2021-08	Detection of red deer, roe deer and fallow deer DNA in foodstuffs and feedstuffs using duplex real-time PCR
MP-02767-DE 2021-08	Detection of DNA from chicken, turkey, duck and goose in foodstuffs and feedstuffs using multiplex real-time PCR
MP-03455-DE 2024-05	Detection of bovine and porcine DNA in foodstuffs and feedstuffs using duplex real-time PCR

1.4.2.2 Detection of genetically modified plants using multiplex real-time PCR in foodstuffs and feedstuffs [Flex C]

ASU L 00.00-122 2008-06	Analysis of foodstuffs – Detection of a specific DNA sequence, frequently used in genetically modified organisms (GMO), from the cauliflower mosaic virus (CaMV 35S promoter, P35S) and from <i>Agrobacterium tumefaciens</i> (T-nos) in foodstuffs – Screening method <i>(Modification: Here also feedstuffs; qualitative detection, triplex real-time PCR with a pFMV system)</i>
ASU L 00.00-148 2014-02	Analysis of foodstuffs – Detection of a DNA sequence of the FMV promoter (pFMV) in foodstuffs using real-time PCR – Element-specific method <i>(Modification: Here also feedstuffs; triplex real-time PCR with a P35S and T-nos system)</i>
ASU L 00.00-154 2014-08	Analysis of foodstuffs – Detection of CTP2-CP4-EPSPS, pat and bar sequences in foodstuffs using triplex real-time PCR – Construct-specific and element-specific methods <i>(Modification: Here also feedstuffs)</i>
MP-02665-DE 2023-01	Screening for genetically modified soy lines without markers (MON87708, MON87769, DP-305423, CV127) in foodstuffs and feedstuffs using multiplex real-time PCR

1.4.3 Detection of potato variety by gel electrophoresis

MP-01207-DE Determination of varietal identity of potatoes
2022-03

1.4.4 Detection of animal species using DNA Sanger sequencing in foodstuffs [Flex C]

ASU L 10.00-12 Determination of fish species in raw fish and fish products by
2021-07 sequence analysis of cytochrome b sequences

MP-01617-DE Determination of tuna species using DNA sequencing
2022-11

MP-03298-DE Identification of crustacean species using DNA sequencing in
2023-04 foodstuffs and feedstuff raw materials

1.5 Immunological analysis of foodstuffs and feedstuffs

1.5.1 Determination of mycotoxins by enzyme immunoassay (ELISA) in foodstuffs and feedstuffs [Flex B]

NEOGEN Quantitative determination of aflatoxins
Veratox® HS
Quantitative Aflatoxin High
Sensitivity Test
V-AflaHS-ENSP_1208
2017-11

NEOGEN Quantitative determination of deoxynivalenol
Veratox® for DON 5/5
V-DON_5/5_NE_0508
2019-07

NEOGEN Quantitative determination of ochratoxin
Veratox® for Ochratoxin
V-Ochra-ES_1214
2017-11

NEOGEN Quantitative determination of zearalenone
Veratox® for Zearalenone
V-Zear_ES_0115
2017-11

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 31 of 39

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1.5.2 Determination of allergens by enzyme immunoassay (ELISA) in foodstuffs and feedstuffs [Flex B]

<p>AgraQuant® Plus Macadamia nut Ref. no. 10002053 2019-08</p>	<p>Enzyme immunoassay for quantitative determination of macadamia nut</p>
<p>AgraQuant® Plus Pistachio Ref. no. 10002088 2019-08</p>	<p>Enzyme immunoassay for quantitative determination of pistachio</p>
<p>AgraQuant® Walnut Ref. no. 10002030 2019-06</p>	<p>Enzyme immunoassay for quantitative determination of walnut</p>
<p>Demeditec Brazil nut ELISA Ref. no. DEPARE01 2023-09</p>	<p>Enzyme immunoassay for quantitative determination of Brazil nut in foodstuffs</p>
<p>Demeditec Pecan nut ELISA Ref. no. DEPECE01 2023-06</p>	<p>Enzyme immunoassay for quantitative determination of pecan nut in foodstuffs</p>
<p>NEOGEN Veratox® for Gliadin R5 V-Gliadin_R5_0114_ENSP 2018-11</p>	<p>Quantitative determination of gliadin/gluten</p>
<p>r-biopharm RIDASCREEN® FAST β-Lactoglobulin Ref no. R4912 2018-04</p>	<p>Quantitative determination of β-lactoglobulin</p>
<p>r-biopharm RIDASCREEN® FAST Casein Ref no. R4612 2019-05</p>	<p>Enzyme immunoassay for quantitative determination of casein</p>

r-biopharm RIDASCREEN® FAST Crustacean Ref no. R7312 2018-04	Quantitative determination of crustaceans
r-biopharm RIDASCREEN® FAST Ei/Egg Protein Ref no. R6402 2018-04	Quantitative determination of egg
r-biopharm RIDASCREEN® FAST Hazelnut Ref no. R6802 2021-03	Enzyme immunoassay for quantitative determination of hazelnut
r-biopharm RIDASCREEN® FAST Lupine Ref no. R6102 2018-04	Quantitative determination of sweet lupin proteins
r-biopharm RIDASCREEN® FAST Mandel/Almond Ref no. R6901 2019-04	Enzyme immunoassay for quantitative determination of almond
r-biopharm RIDASCREEN® FAST Milk Ref no. R4652 2021-11	Enzyme immunoassay for quantitative determination of milk protein
r-biopharm RIDASCREEN® Peanut Ref no. R6811 2021-12	Enzyme immunoassay for quantitative determination of peanut or peanut protein
r-biopharm RIDASCREEN® FAST Mustard Ref no. R6152 2018-04	Quantitative determination of mustard

- 2 Analysis of environmental samples, fitment and utensils in food and feed areas
- 2.1 Determination of bacteria, yeasts and moulds using cultural microbiological methods in environmental samples, fitment and utensils in food and feed areas [Flex C]
- | | |
|-------------------------------|---|
| ISO 6579-1
2017-02 | Microbiology of the food chain – Horizontal method for the detection, enumeration and serotyping of salmonella – Part 1: Detection of <i>Salmonella</i> spp. |
| ISO 21527-1
2008-07 | Horizontal method for the enumeration of yeasts and moulds – Part 1: Colony-count technique in products with water activity greater than 0.95 |
| ISO 21527-2
2008-07 | Horizontal method for e enumeration of yeasts and moulds – Part 2: Colony count technique in products with water activity equal to or less than 0.95 |
| ISO 21528-1
2017-06 | Microbiology of the food chain – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 1: Detection of Enterobacteriaceae
(Modification: <i>Extension to surface examinations using swabs</i>) |
| DIN ISO 16649-2
2020-12 | Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of β -glucuronidase-positive <i>Escherichia coli</i> – Part 2: Colony-count technique at 44 °C using 5-bromo-4-chloro-3-indolyl β -D-glucuronide
(Modification: <i>Also for environmental samples</i>) |
| DIN EN ISO 4833-1
2013-12 | Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony-count technique at 30 degrees C by the pour plate technique |
| DIN EN ISO 6888-1
2022-06 | Microbiology of the food chain – Horizontal method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) – Part 1: Method using Baird-Parker agar medium |
| 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
(Modification: <i>Confirmation of culture-typical colonies using MALDI-TOF, Bruker Daltonic BDAL/11897 MSPS database, 2023</i>) |

Valid from: 20.06.2025

Date of issue: 20.06.2025

Page 35 of 39

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Nordisk Metodikkommitté för Livsmedel. NMKL No. 71, 5. Ed., 1999	Salmonella. Detection in foods. (Modification: <i>Also for environmental samples, fitment and utensils in food and feed areas, confirmation using MALDI-TOF, Bruker Daltonic BDAL/11897 MSPS database, 2023</i>)
MP-02380-DE 2020-10	Detection of <i>Listeria</i> spp. and <i>L. monocytogenes</i> and quantification of <i>L. monocytogenes</i> using RAPID'L mono Agar® in foodstuffs and environmental samples
MP-02642-DE 2023-01	Enumeration of <i>Pseudomonas</i> spp. and <i>Aeromonas</i> spp. in ready meals, fishery products and environmental controls
2.2	Detection of Salmonella using real-time PCR [Flex A]
ASU L 00.00-98 2007-04	Analysis of foodstuffs – Qualitative detection of Salmonella in foodstuffs. Real-time PCR method (Modification: <i>Here for environmental samples, fitment and utensils in food and feed areas</i>)
2.3	Identification and typing of bacteria using MALDI-TOF in environmental samples, fitment and utensils in food and feed areas [Flex C]
AOAC 2017.10 2017	Confirmation and identification of <i>Listeria monocytogenes</i> , <i>Listeria</i> species and other gram-positive organisms
MP-01115-DE 2023-01	Identification of bacteria using MALDI-TOF (Bruker Daltonic BDAL/11897 MSPS, 2023) (Restriction: <i>Here for gram-negative bacteria</i>)
2.4	Identification and typing of bacteria by agglutination [Flex A]
ISO/TR 6579-3 2014-07	Microbiology of the food chain – Horizontal method for the detection, enumeration and serotyping of salmonella – Part 3: Guidelines for serotyping of <i>Salmonella</i> spp.
2.5	Qualitative determination of allergens by enzyme immunoassay (ELISA) in environmental samples, fitment and utensils in food and feed areas [Flex B]
AgraQuant® Plus Macadamia nut Ref. no. 10002053 2019-04	Enzyme immunoassay for quantitative determination of macadamia nut (Restriction: <i>Here only qualitative determination</i>)

<p>AgraQuant® Plus Pistachio Ref. no. 10002088 2019-08</p>	<p>Enzyme immunoassay for quantitative determination of pistachio (Restriction: <i>Here only qualitative determination</i>)</p>
<p>AgraQuant® Walnut Ref. no. 10002030 2019-06</p>	<p>Enzyme immunoassay for quantitative determination of walnut (Restriction: <i>Here only qualitative determination</i>)</p>
<p>Demeditec Brazil nut ELISA Ref. no. DEPARE01 2023-09</p>	<p>Enzyme immunoassay for quantitative determination of Brazil nut in foodstuffs (Modification: <i>Here for environmental samples, fitment and utensils in food and feed areas</i>) (Restriction: <i>Here only qualitative determination</i>)</p>
<p>Demeditec Pecan nut ELISA Ref. no. DEPECE01 2023-06</p>	<p>Enzyme immunoassay for quantitative determination of pecan nut in foodstuffs (Modification: <i>Here for environmental samples, fitment and utensils in food and feed areas</i>) (Restriction: <i>Here only qualitative determination</i>)</p>
<p>NEOGEN Veratox® for Gliadin R5 V-Gliadin_R5_0114_ENSP 2018-11</p>	<p>Quantitative determination of gliadin/gluten (Restriction: <i>Here only qualitative determination</i>)</p>
<p>r-biopharm RIDASCREEN® FAST β- Lactoglobulin Ref. no. R4912 2018-04</p>	<p>Quantitative determination of β-lactoglobulin (Restriction: <i>Here only qualitative determination</i>)</p>
<p>r-biopharm RIDASCREEN® FAST Casein Ref. no. R4612 2019-05</p>	<p>Enzyme immunoassay for quantitative determination of casein (Restriction: <i>Here only qualitative determination</i>)</p>
<p>r-biopharm RIDASCREEN® FAST Crustacean Ref. no. R7312 2018-04</p>	<p>Quantitative determination of crustaceans (Restriction: <i>Here only qualitative determination</i>)</p>

r-biopharm RIDASCREEN® FAST Ei/Egg Protein Ref. no. R6402 2018-04	Quantitative determination of egg (Restriction: <i>Here only qualitative determination</i>)
r-biopharm RIDASCREEN® FAST Hazelnut Ref. no. R6802 2021-03	Enzyme immunoassay for quantitative determination of hazelnut (Restriction: <i>Here only qualitative determination</i>)
r-biopharm RIDASCREEN® FAST Lupine Ref. no. R6102 2018-04	Quantitative determination of sweet lupin proteins (Restriction: <i>Here only qualitative determination</i>)
r-biopharm RIDASCREEN® FAST Mandel/Almond Ref. no. R6901 2019-04	Enzyme immunoassay for quantitative determination of almond (Restriction: <i>Here only qualitative determination</i>)
r-biopharm RIDASCREEN® FAST Milk Ref. no. R4652 2021-11	Enzyme immunoassay for quantitative determination of milk protein (Restriction: <i>Here only qualitative determination</i>)
r-biopharm RIDASCREEN® Peanut Ref. no. R6811 2021-12	Enzyme immunoassay for quantitative determination of peanut or peanut protein (Restriction: <i>Here only qualitative determination</i>)
r-biopharm RIDASCREEN® FAST Senf/Mustard Ref. no. R6152 2018-04	Quantitative determination of mustard (Restriction: <i>Here only qualitative determination</i>)
r-biopharm RIDASCREEN® FAST Sesame Ref. no. R7202 2018-04	Quantitative determination of sesame or sesame content (Restriction: <i>Here only qualitative determination</i>)

r-biopharm RIDASCREEN® FAST Soya Ref. no. R7102 2018-04	Quantitative determination of soy proteins (Restriction: <i>Here only qualitative determination</i>)
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2.6 Determination of allergens of plant origin using real-time PCR in environmental samples, fitment and utensils in food and feed areas [Flex C]

MP-01541-DE 2023-03	Analysis of foodstuffs and environmental samples for the presence of celery DNA using real-time PCR
MP-03457-DE 2023-11	Analysis of foodstuffs and environmental samples for the presence of mustard DNA using real-time PCR

Abbreviations used:

AOAC	AOAC INTERNATIONAL (formerly Association of Official Agricultural Chemists)
ASU	Official Collection of Methods of Analysis on the basis of § 64 <i>Lebensmittel- und Futtermittelgesetzbuch</i> (German Food and Feed Act, <i>LFGB</i>)
CODEX STAN	Standard method as per Codex Alimentarius
DIN	Deutsches Institut für Normung (German Institute for Standardization)
DGF	Deutsche Gesellschaft für Fettwissenschaft (German Society for Fat Research)
EN	European standard
EURL	European Union Reference Laboratory for Animal Proteins in feedingstuffs
IDF	International Dairy Federation
IEC	International Electrotechnical Commission
ICUMSA	International Commission for Uniform Methods of Sugar Analysis
ISO	International Organization for Standardization
MP-XXXXX-DE	In-house method of AGROLAB LUFA GmbH
OIML	International Organization of Legal Metrology
TR	Technical report
USP	United States Pharmacopoeia
VDLUFA	Verband Deutscher Landwirtschaftlicher Untersuchungs- und Forschungsanstalten (Association of German Agricultural Testing and Research Institutions)
Regulation (EC)	Regulation of the European Community