Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-14170-01-05 according to DIN EN ISO/IEC 17025:2018

Valid from: **16.03.2023**

Date of issue: 25.07.2023

This annex is a part of the accreditation certificate D-PL-14170-01-00.

Holder of partial accreditation certificate:

GBA Gesellschaft für Bioanalytik mbH
Goldtschmidtstraße 5
21073 Hamburg

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 confirm generally with the principles of DIN EN ISO 9001.

Tests in the fields:

Physical, physico–chemical and chemical analysis of commodity goods, feedstuffs, foodstuffs
Selected sensory analysis of foodstuffs and feedstuffs
Microbiological analysis of foodstuffs, feedstuffs
Selected molecular biological and immunological analysis of foodstuffs and feedstuffs
Microbiological analysis of environmental samples, fitment and utensils in food areas

at the locations

Goldtschmidtstraße 5, 21073 Hamburg
Am Werder 1, 21073 Hamburg
Harburger Ring 17, 21073 Hamburg[1)]
Bruchstraße 5c, 45883 Gelsenkirchen
Brekelbaumstraße 1, 31789 Hameln
Flensburger Straße 15, 25421 Pinneberg
Julius–Hölder–Str. 20, 70597 Stuttgart

[1)] No conformity assessment activities are carried out at these locations. These locations are used to store equipment for sampling or as office space.

Table of contents

The test methods are marked with the following symbols for the locations at which they are carried out:

GE = Gelsenkirchen
HHGS = Hamburg, Goldtschmidtstraße 5
HHAW = Hamburg, Am Werder 1
HM = Hameln
PI = Pinneberg
S = Stuttgart

Flexibility of the scope of accreditation

With the exception of the specialist modules for water, soil and contaminated sites and for waste, the testing laboratories are permitted to apply the listed standardised or equivalent test methods with different versions of the standards without obtaining prior notification and consent from DAkkS.

Within the specified test fields, 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.

1 Commodities

1.1 Sample preparation of commodities for chromatographic analysis **

In–house method HH–MA–M 03–054 2020–08	MOSH_MOAH Sample preparation GC/LC–FID (Restriction: *Here for commodities*)	HHGS

1.2 Determination of petroleum hydrocarbons by coupled liquid chromatography–gas chromatography (LC–GC) with conventional detectors in commodities **

In–house method HH–MA–M 03–055 2017–06	MOSH/MOAH measurement LC/GC–FID	HHAW

1.3 Determination of additives and polycyclic aromatic hydrocarbons by gas chromatography (GC) with mass–selective detectors (MS, MS/MS) *

DIN EN 12673 (F 15) 1999–05	Water quality – Gas chromatographic determination of some selected chlorophenols in water (Modification: *Matrix commodities, additionally triclosan and bisphenol A*)	P	I
DIN EN ISO 22032 (F 28) 2009–07	Water quality – Determination of selected polybrominated diphenyl ethers in sediment and sewage sludge – Method using extraction and gas chromatography/mass spectrometry (Modification: *Other analytes polybrominated biphenyls (PBB), tetrabromobisphenol–A (TBBP–A), hexabromocyclododecane (HBCD), tribromanisole (TBA); matrix here polymers; ultrasonic extraction; other internal standards*)	P	I

DIN EN ISO 12010 (H 47) 2019–09	Water quality – Determination of short–chain polychlorinated alkanes (SCCPs) in water – Method using gas chromatography–mass spectrometry (GC–MS) and negative–ion chemical ionisation (NCI) (Modification: *Matrix commodities; additional determination of MCCP, modular clean–up, modified quantification, detector GC–MSD*	P	I
DIN CEN/TS 16183; DIN SPEC 91265 2012–05	Sludge, treated biowaste and soil – Determination of selected phthalates using GC–MS (Modification: *Matrix here commodities*)	P	I
DIN 19742 2014–08	Soil quality – Determination of selected phthalates in sludge, sediment, solid waste and soil after extraction and determination using gas chromatography mass spectrometry (GC–MS) (Modification: *Additionally analytes dimethyl, diethyl, dipropyl, diisobutyl, dipentyl, benzyl butyl, dicyclohexyl, dioctyl, diisononyl, diisodecyl phthalate; matrix here commodities*)	P	I
AfPS GS 2019:01 PAK 2020–04	Testing and assessment of polycyclic aromatic hydrocarbons (PAHs) in the award of the GS mark (Restriction: Matrix here only commodities; only testing for PAHs, no risk assessment, categorisation and evaluation)	P	I

1.4 Migration tests in commodities

ASU B 80.30–3 2008–04	Analysis of commodity goods – Further rules for testing compliance with migration limits; Annex I to Commission Directive 2002/72/EC of 6 August 2002 relating to plastic materials and articles intended to come into contact with foodstuffs as last amended by 2007/19/EC, OJ EC No L 91/17 of 31.03.2007) (corrected by OJ L 97/50 of 12.04.2007)	HHGS
ASU B 80.30–6 2008–10	Analysis of commodity goods – Plastics – Part 3: Test methods for overall migration into aqueous simulants by total immersion (adoption of standard of the same name DIN EN 1186–3, July 2002 edition)	HHGS

ASU B 80.30–8 2008–10	Analysis of commodity goods – Plastics – Part 5: Test methods for overall migration into aqueous food simulants by cell (adoption of standard of the same name DIN EN 1186–5, July 2002 edition)	HHGS
ASU B 80.30–10 2008–10	Analysis of commodity goods – Plastics – Part 7: Test methods for overall migration into aqueous simulants using a pouch (adoption of standard of the same name DIN EN 1186–7, July 2002 edition)	HHGS
ASU B 80.30–12 2008–10	Analysis of commodity goods – Plastics – Part 9: Test methods for overall migration into aqueous simulants by article filling (adoption of standard of the same name DIN EN 1186–9, July 2002 edition)	HHGS
ASU B 80.30–17 2008–10	Analysis of commodity goods – Plastics – Part 14: Test methods for 'substitute tests' for overall migration from plastics intended to come into contact with fatty foodstuffs using test media iso–octane and 95% ethanol (adoption of standard of the same name DIN EN 1186–14, December 2002 edition)	HHGS
ASU B 80.30–18 2008–10	Analysis of commodity goods – Plastics – Part 15: Alternative test methods to migration into fatty food simulants by rapid extraction into iso–octane and/or 95% ethanol (adoption of standard of the same name DIN EN 1186–15, December 2002 edition)	HHGS
ASU B 80.30–27 2009–11	Analysis of commodity goods – Test methods for overall migration at high temperatures (adoption of standard of the same name DIN EN 1186–13, December 2002 edition)	HHGS

2 Foodstuffs

2.1 Sampling of foodstuffs

ASU 06.00–59 2016–10	Analysis of foodstuffs – Sampling of carcasses for microbiological analysis (adoption of the standard of the same name DIN EN ISO 17604, December 2015 edition) (Modification: *Only destructive method and swab method*)	S

In–house method IPDP 2288/012 28 September 2020 2020–09	Sampling and sample transport – Foodstuffs	S

2.2 Sample pretreatment, preparation and processing of foodstuffs

2.2.1 Extraction for chemical, chemico–physical and physical analysis of foodstuffs and feedstuffs (**: HHGS)

ASU L 00.00–34 2010–09	Analysis of foodstuffs – Modular multiple analytical method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19) (Restriction: *Here only sample preparation*)	HHGS
ASU L 00.00–49/2 1999–11	Analysis of foodstuffs – Non–fatty foods – Determination of dithiocarbamate and thiuram disulfide residues – Part 2: Gas chromatographic method (adoption of standard of the same name DIN EN 12396 Part 2, December 1998 edition) (Restriction: *Here only sample preparation*)	HHGS
ASU L 00.00–115 2018–10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean–up by dispersive SPE in plant–based foodstuffs – Modular QuEChERS method (adoption of standard of the same name DIN EN 15662, July 2018) (Restriction: *Here only sample preparation*)	HM, HHGS
ASU L 05.00–16 2014–08	Analysis of foodstuffs – Determination of cholesterol content in eggs and egg products – Gas chromatographic method (Restriction: *Here only sample preparation*)	HHGS
ASU L 13.04–1 2006–12	Analysis of foodstuffs – Determination of low–boiling halogenated hydrocarbons in edible oils (adoption of standard of the same name DIN EN ISO 16035, November 2005 edition) (Restriction: *Here only sample preparation*)	HHGS

ASU L 17.00–12 1999–11	Analysis of foodstuffs – Determination of butyric acid as methyl ester in fat from bread including small baked products made of bread dough (Restriction: *Here only sample preparation*)	HHGS
ASU L 53.00–1 1999–11	Analysis of foodstuffs – Gas chromatographic determination of ethylene oxide and 2–chloroethanol in spices (Restriction: *Here only sample preparation*)	HHGS
In–house method HH–MA–M 09–020 2021–10	Glyphosate/AMPA/glufosinate – Processing (Restriction: *Here for foodstuffs*)	HHGS
In–house method HH–MA–M 09–022 2021–09	Polar pesticides – Processing (Restriction: *Here for foodstuffs*)	HHGS
In–house method HH–MA–M 09–011 2021–02	Acidic pesticides – Processing (Restriction: *Here for foodstuffs*)	HHGS
In–house method HH–MA–M 03–054 2020–08	MOSH_MOAH Sample preparation GC/LC–FID (Restriction: *Here for foodstuffs*)	HHGS
In–house method HH–MA–M 02–087 2019–12	Morpholine and amino alcohols – LC/MS measurement (Restriction: *Here for foodstuffs, here only sample processing*)	HHGS
In–house method HH–MA–M 02–107 2019–09	Dithianon processing, measurement with LC–MS/MS (Restriction: *Here for foodstuffs, here only sample processing*)	HHGS
In–house method HH–MA–M 02–110 2021–03	Phenylurea with LC–MS/MS (Restriction: *Here only sample processing*)	HHGS
In–house method HH–MA–M 02–118 2013–08	Quaternary ammonium compounds in fruit and vegetables, acidic fruit, dried fruit, oilseeds and fatty foods, cereals and cereal products, special matrices with LC–MS/MS (Restriction: *Here only sample processing*)	HHGS

In–house method HH–MA–M 02–144 2016–05	PCP in foodstuffs with LC–MS/MS (Restriction: *Here only sample processing*)	HHGS
In–house method HH–MA–M 02–145 2018–03	Fenbutatin oxide – Processing, measurement with LC–MS/MS (Restriction: *Here only sample processing*)	HHGS
In–house method HH–MA–M 02–153 2019–12	Maleic hydrazide – Processing and measurement (Restriction: *Here only sample processing*)	HHGS
In–house method HH–MA–M 02–159 2021–10	Matrine/oxymatrine in foodstuffs and feedstuffs – Processing and measurement with LC–MS/MS (Restriction: *Here only sample processing*)	HHGS
In–house method HH–MA–M 03–011 2022–01	VOC and solvents in food and pharmaceutical samples using GC headspace (Restriction: *Here for foodstuffs; here only sample processing*)	HHGS
In–house method HH–MA–M 03–027 2020–06	Essential oils in spices with GC–FID – Deviation: Matrix in special matrices) (Restriction: *Here only sample processing*)	HHGS
In–house method HH–MA–M 03–058 2020–07	PAH 15 measurement GC–MS/MS (Restriction: *Here only sample processing*)	HHGS
In–house method HH–MA–M 03–061 2021–04	Phosphine (Restriction: *Here only sample processing*)	HHGS
In–house method HH–MA–M 03–064 2021–09	Ethylene oxide/2–chloroethanol with QuEChERS – Processing and measurement (Restriction: *Here only sample processing*)	HHGS

2.2.2 Digestions for elemental analysis *

ASU L 00.00–19/1 2015–06	Analysis of foodstuffs – Determination of trace elements in foodstuffs – Pressure digestion (adoption of standard of the same name DIN EN 13805, December 2014 edition)	HHGS, HM

2.2.3 Transesterification of fats for gas chromatographic analysis of foodstuffs *

ASU L 13.00–27/2 2012–01	Analysis of foodstuffs – Gas chromatography of fatty acid methyl esters – Part 2: Production of fatty acid methyl esters in animal and vegetable fats and oils (adoption of standard of the same name DIN EN ISO 12966–2, May 2011)	HHGS, HM
DGF C–VI 11d 2019	Fatty acid methyl ester – Alkaline transesterification	HHGS, HM

2.2.4 Extraction of DNA for molecular biological analysis of foodstuffs

CONGEN Surefood® PREP Basic Article no. S1052 2017–03	Extraction of plant and animal DNA (deoxyribonucleic acid) from raw materials and from slightly processed foods and feed as well as for the extraction of animal DNA from highly processed food and feed (Restriction: *Here for foodstuffs*)	HM
CONGEN Surefood® PREP Advanced Article no. S1053 2017–03	Extraction of plant and animal DNA (deoxyribonucleic acid) using two different protocols: 1. Sensitive extraction of plant and animal DNA of allergens from food 2. Extraction of plant DNA from highly processed food and feed as well as from samples that produce an inhibition in the DNA when extracted with protocol 1 (Restriction: *Here for foodstuffs*)	HM

2.3 Simple descriptive tests of foodstuffs

ASU L 00.90–6 2015–06	Analysis of foodstuffs – Sensory analysis – Simple descriptive test (adoption of standard of the same name DIN 10964, November 2014 edition) (Modification: *No recording of the test climate*)	S
In–house method HM–MA–M 10–011 2016–04	Sensory testing	HM

In–house method HM–MA–M 10–012 2016–08	Marketability	HM
In–house method HH–MA–M 10–014 2021–06	Optical findings *(Modification: Here in foodstuffs*)	HHGS
In–house method HH–MA–M 10–016 2021–11	Sensory testing for foodstuffs, packaging materials and commodities using organoleptics (Restriction: *Here for foodstuffs*)	HHGS

2.4 Temperature measurement of foodstuffs

In–house method IPDP 2320/003 02 April 2015	Measurement of the temperature of samples using a probe or infrared thermometer	S

2.5 Determination of ingredients and characteristics by gravimetry in foodstuffs **

ASU L 00.00–18 1997–01	Analysis of foodstuffs – Determination of fibre in foodstuffs	HHGS, HM
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)	HHGS, HM
ASU L 06.00–3 2014–08	Analysis of foodstuffs – Determination of water content in meat and meat products – Gravimetric method – Reference method	HHGS, HM
ASU L 06.00–4 2017–10	Analysis of foodstuffs– Determination of ash in meat, meat products and sausages – Gravimetric method (reference method)	HHGS, HM
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	HHGS, HM
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	HHGS, HM

ASU L 16.01–1 2008–12	Analysis of foodstuffs – Determination of moisture content in cereal flour	HHGS, HM
ASU L 16.01–2 2008–12	Analysis of foodstuffs – Determination of ash in cereal flour	HHGS, HM
ASU L 17.00–1 1982–05	Determination of loss on drying in bread including small baked products made of bread dough	HHGS, HM
ASU L 17.00–3 1982–05	Determination of ash in bread including small baked products made of bread dough	HHGS, HM
ASU L 17.00–4 2017–10	Analysis of foodstuffs – Determination of total fat content in bread including small baked products made of bread dough after acid digestion by extraction and gravimetry	HHGS, HM
ASU L 31.00–1 1997–01	Analysis of foodstuffs – Determination of the relative density of fruit and vegetable juices (adoption of standard of the same name DIN EN 1131, December 1994 edition)	HHGS, HM
ASU L 39.00–2 (EG) 1981–04	Analytical methods for determination of the composition of certain sugars intended for human consumption – Method 2: Determination of dry matter (vacuum drying)	HHGS
ASU L 44.00–3 1985–12	Analysis of foodstuffs; determination of dry matter content in solid chocolate	HHGS, HM
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)	HHGS, HM
ASU L 53.00–8 2004–07	Analysis of foodstuffs – Determination of spices and seasoning ingredients – Determination of water content (distillation method) (adoption of standard of the same name DIN 10229, August 2000 edition)	HHGS
ASU L 53.00–10 2019–12	Analysis of foodstuffs – Determination of essential oil content in spices, seasoning ingredients and herbs – Steam distillation method (adoption of standard of the same name DIN EN ISO 6571, March 2018)	HHGS

In–house method HH–MA–M 10–004 2016–10	Insoluble (cold/hot water) and starch/gums in liquorice and liquorice root	HHGS
In–house method HM–MA–M 04–008 2022–01	Determination of dry matter in foodstuffs using halogen drying	HM

2.6 Viscometry of foodstuffs

In–house method HH–MA–M 11–004 2017–01	Viscosity	HHGS

2.7 Determination of elements in foodstuffs

2.7.1 Determination of elements using inductively coupled plasma optical emission spectrometry (ICP–OES) in foodstuffs *

DIN EN ISO 11885 (E 22) 2009–09	Water quality – Determination of selected elements by inductively coupled plasma atomic emission spectroscopy (ICP–OES) (Modification: *Here for foodstuffs*) (Restriction: *Measurement only*)	PI
ASU L 00.00–144 2019–07	Analysis of foodstuffs – Determination of calcium, copper, iron, magnesium, manganese, phosphorus, potassium, sodium, sulphur and zinc in foodstuffs with ICP–OES (adoption of standard of the same name DIN EN 16943, July 2017 edition) (Restriction: *Measurement only*)	PI

2.7.2 Determination of elements by inductively coupled plasma mass spectrometry (ICP–MS) in foodstuffs *

DIN EN ISO 17294–2 (E 29) 2017–01	Water quality – Application of inductively coupled plasma mass spectrometry (ICP–MS) – Part 2: Determination of selected elements including uranium isotopes (Modification: *Here for foodstuffs*) (Restriction: *Measurement only*)	PI

ASU L 00.00–135 2011–01	Analysis of foodstuffs – Determination of arsenic, cadmium, mercury and lead in foodstuffs by ICP–MS after pressure digestion (adoption of standard of the same name, DIN EN 15763, April 2010 edition) (Restriction: *Measurement only*)	PI

2.8 Determination of pH value, water activity and protective gases by electrode measurement in foodstuffs (**: HHGS)

ASU L 06.00–2 1980–09	Measurement of pH in meat and meat products	HHGS, S
In–house method HH–MA–M 11–008 2021–06	aW–value-measurement	HHGS
In–house method HH–MA–M 11–009 2018–05	Gas analysis in foodstuffs	HHGS
In–house method HM–MA–M 11–001 2019–08	aW value measurement	HM
In–house method IPDP 3420/003 17 June 2015 2015–06	Measurement of inert gas composition	S

2.9 Liquid chromatographic analysis of foodstuffs

2.9.1 Determination of organic contaminants, ingredients and additives by liquid chromatography (LC) with conventional detectors (DAD, ELSD, FLD, PDA, UV, RI) in foodstuffs **

ASU L 00.00–9 1984–11	Analysis of foodstuffs; determination of preservatives in low–fat foodstuffs	HHGS

ASU L 00.00–61 2010–01	Analysis of foodstuffs – Determination of cholecalciferol (vitamin D3) or ergocalciferol (vitamin D2) in foodstuffs – HPLC method (adoption of standard of the same name DIN EN 12821, August 2009 edition) (Modification: *Automated fractionation, chromatography of fractionation in RP mode*)	HHGS
ASU L 00.00–62 2015–06	Analysis of foodstuffs – Determination of vitamin E (alpha, beta, gamma and delta–tocopherol) in foodstuffs by high performance liquid chromatography (adoption of standard of the same name DIN EN 12822, August 2014 edition)	HHGS
ASU L 00.00–63/1 2015–06	Analysis of foodstuffs – Determination of vitamin A in foodstuffs by high performance liquid chromatography – Part 1: Determination of all–E retinol and 13–Z retinol (adoption of standard of the same name DIN EN 12823–1, August 2014 edition)	HHGS
ASU L 00.00–83 2015–06	Analysis of foodstuffs – Determination of vitamin B1 in foodstuffs by high performance liquid chromatography (adoption of standard of the same name DIN EN 14122, August 2014 edition)	HHGS
ASU L 00.00–84 2015–06	Analysis of foodstuffs – Determination of vitamin B2 in foodstuffs by high performance liquid chromatography (adoption of standard of the same name DIN EN 14152, August 2014 edition)	HHGS
ASU L 00.00–86 2004–07	Analysis of foodstuffs – Determination of vitamin K1 with HPLC (adoption of standard of the same name DIN EN 14148, October 2003 edition)	HHGS
ASU L 00.00–97 2006–12	Analysis of foodstuffs – Determination of vitamin B6 (including glucosidic bound compounds) in foodstuffs – HPLC method (adoption of standard of the same name DIN EN 14663, March 2006 edition)	HHGS
ASU L 15.00–2 2014–02	Determination of aflatoxin B1 and the sum of aflatoxin B1, B2, G1 and G2 in cereals, nuts and related products Changed post–column derivitisation	HM
ASU L 15.03–1 2010–01	Analysis of foodstuffs – Determination of ochratoxin A in barley – HPLC method with clean–up on an immunoaffinity column (adoption of standard of the same name DIN EN 14132, September 2009 edition)	HHGS, HM

ASU L 18.00–16 1999–11	Analysis of foodstuffs – Determination of theobromine and caffeine in pastries	HHGS
ASU L 23.05–2 2012–01	Determination of aflatoxin B1 and the sum of aflatoxin B1, B2, G1 and G2 in hazelnuts, peanuts, pistachios, figs and paprika powder – HPLC method with immunoaffinity cleaning and post–column derivitisation	HM
ASU L 23.05–3 2014–02	Analysis of foodstuffs – Determination of aflatoxin B1 and the sum of aflatoxin B1, B2, G1 and G2 in nuts and related products – High performance liquid chromatographic method (adoption of standard of the same name DIN EN ISO 16050, September 2011 edition)	HHGS
ASU L 26.00–1 2018–10	Analysis of foodstuffs – Determination of nitrate content of vegetable products – HPLC/IC method (adoption of standard of the same name DIN EN 12014 Part 2, February 2018) (Modification: *Further matrix tea with clean–up, different chromatographic conditions*)	HHGS
ASU L 43.08–1 1996–02	Analysis of foodstuffs – Determination of glycyrrhizin in liquorice and confectionery products containing liquorice by reversed phase high performance liquid chromatography	HHGS
ASU L 46.00–3 2013–08	Analysis of foodstuffs – Analysis of coffee and coffee products – Determination of caffeine content using HPLC – Reference method (adoption of standard of the same name DIN ISO 20481, January 2011 edition)	HHGS
ASU L 47.00–6 2014–02	Analysis of foodstuffs – Analysis of tea and solid tea extract – Determination of caffeine content; HPLC method (adoption of standard of the same name DIN 10727, May 2004 edition)	HHGS
ASTA 21.3 2004–10	Pungency of capsicums and their oleoresins (HPLC method) (Restriction: *Matrix only chilli, paprika, oleoresin*)	HHGS
In–house method HH–MA–M 02–007 2019–12	Ascorbine and dehydroascorbic acid – Vitamin C – HPLC–UV	HHGS

In–house method HM–MA–M 02–033 2018–12	Vanillin, ethylvanillin, para–hydroxybenzaldehyde by HPLC–DAD	HM
In–house method HM–MA M 02–053 2016–04	Indole in shellfish and crustaceans by HPLC–DAD	HM
In–house method HM–MA–M 02–060 2018–01	Coumarin using HPLC–DAD (Restriction: *Matrix only foodstuffs containing cinnamon, cinnamon, spice, tea*)	HM
In–house method HM–MA–M 02–065 2022–01	Sugar in foodstuffs and feedstuffs by HPLC–RI (Restriction: *Here for foodstuffs*)	HM
In–house method HH–MA–M 02–105 2022–01	Polycyclic aromatic hydrocarbons in foodstuffs by HPLC–DAD/FLD	HHGS

2.9.2 Determination of plant protection product residues using gas chromatography (LC) with mass spectrometry (MS/MS) in foodstuffs **

ASU L 00.00–76 2008–12	Analysis of foodstuffs – Determination of chlormequat and mepiquat in low–fat foodstuffs – LC–MS/MS method (adoption of standard of the same name DIN EN 15055, August 2006 edition) (Restriction: *Matrix only plant–based foodstuffs*)	HM
ASU L 00.00–115 2018–10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean–up by dispersive SPE in plant–based foodstuffs – Modular QuEChERS method (adoption of standard of the same name DIN EN 15662, July 2018)	HHAW
In–house method HH–MA–M 02–107 2019–09	Dithianon processing, measurement with LC–MS/MS (Restriction: *Here only measurement*)	HHAW
In–house method HH–MA–M 02–110 2021–03	Phenylurea with LC–MS/MS (Restriction: *Here only measurement*)	HHAW

In–house method HH–MA–M 02–118 2013–08	Quaternary ammonium compounds in fruit and vegetables, acidic fruit, dried fruit, oilseeds and fatty foods, cereals and cereal products, special matrices with LC–MS/MS (Restriction: *Here only measurement*)	HHAW
In–house method HH–MA–M 02–135 2021–03	Acid pesticides – LC–MS/MS measurement	HHAW
In–house method HH–MA–M 02–144 2016–05	PCP in foodstuffs with LC–MS/MS (Restriction: *Here only measurement*)	HHAW
In–house method HH–MA–M 02–145 2018–03	Fenbutatin oxide – Processing, measurement with LC–MS/MS (Restriction: *Here only measurement*)	HHAW
In–house method HH–MA–M 02–153 2019–12	Maleic hydrazide – Processing and measurement (Restriction: *Here only measurement*)	HHAW
In–house method HH–MA–M 02–155 2021–10	Polar pesticides – LC–MS/MS measurement	HHAW
In–house method HH–MA–M 02–156 2021–10	Glyphosate/AMPA/glufosinate – LC–MS/MS measurement	HHAW
In–house method HH–MA–M 02–159 2021–10	Matrine/oxymatrine in foodstuffs and feedstuffs – Processing and measurement with LC–MS/MS (Restriction: *Here only measurement*)	HHAW
In–house method HM–MA–M 02–049 2017–03	Nicotine, measurement using HPLC–MS/MS	HM

2.9.3 Determination of additives using gas chromatography (LC) with mass spectrometry (MS/MS) in foodstuffs **

In–house method HH–MA–M 02–087 2019–12	Morpholine and amino alcohols – LC/MS measurement (Restriction: *Here only measurement*)	HHAW

In–house method HM–MA–M 02–044 2018–06	Azo colourants, measurement using LC–MS/MS	HM

2.9.4 Determination of residues of pharmacologically active substances using gas chromatography (LC) with mass spectrometry (MS/MS) in foodstuffs **

In–house method HM–MA–M 02–010 2018–12	Determination of nitrofuran metabolites in foodstuffs of animal origin	HM
In–house method HM–MA–M 02–012 2016–06	Chloramphenicol in foodstuffs of animal origin using LC–MS/MS	HM
In–house method HM–MA–M 02–014 2014–09	Malachite green and its leuco base, brilliant green, and crystal violet and its leuco base in foodstuffs of animal origin	HM
In–house method HM–MA–M 02–016 2017–03	Determination of streptomycin in honey	HM
In–house method HM–MA–M 02–017 2017–03	Tetracyclines and tylosin in honey	HM
In–house method HM–MA–M 02–018 2017–03	Tetracyclines in foodstuffs of animal origin (excluding honey)	HM
In–house method HM–MA–M 02–021 2017–03	Sulfonamides in honey	HM

2.9.5 Determination of organic contaminants using gas chromatography (LC) with mass spectrometry (MS/MS) in foodstuffs **

In–house method HM–MA–M 02–007 2018–08	Zearalenone in cereals, cereal products and feedstuffs	HM

In–house method HM–MA–M 02–013 2018–08	Fumonisins, LC–MS/MS measurement	HM
In–house method HM–MA–M 02–032 2018–06	Aflatoxin B1, B2, G1 and G2 and ochratoxin A by LC–MS/MS	HM
In–house method HM–MA–M 02–052 2016–01	Patulin, LC–MS/MS	HM
In–house method HM–MA–M 02–056 2016–11	Zearalenone in oil	HM
In–house method HM–MA–M 02–057 2018–08	T–2 / HT–2 toxin, quantitative determination	HM
In–house method HM–MA–M 02–008 2018–08	Determination of deoxynivalenol and nivalenol in cereals, cereal products and feedstuffs (Restriction: *Here only in foodstuffs*)	HM
In–house method HM–MA–M 02–022 2018–12	Morphine in poppy and poppy seed products	HM
In–house method HM–MA–M 02–051 2019–01	Acrylamide in LM, using LC–MS/MS	HM
In–house method HM–MA–M 02–055 2017–11	Pyrrolizidine alkaloids/tropane alkaloids measurement using LC–MS/MS Agilent 6495	HM

2.10 Gas chromatographic analysis of foodstuffs

2.10.1 Determination of ingredients, plant protection product residues and solvent residues using gas chromatography (GC) with conventional detectors (FID, ECD) in foodstuffs (**: HHAW)

ASU L 00.00–49/2 1999–11	Analysis of foodstuffs – Non–fatty foods – Determination of dithiocarbamate and thiuram disulfide residues – Part 2: Gas chromatographic method (adoption of standard of the same name DIN EN 12396 Part 2, December 1998 edition) (Restriction: *Here only measurement*)	HHAW
ASU L 05.00–16 2014–08	Analysis of foodstuffs – Determination of cholesterol content in eggs and egg products – Gas chromatographic method (Restriction: *Here only measurement*)	HHAW
ASU L 13.04–1 2006–12	Analysis of foodstuffs – Determination of low–boiling halogenated hydrocarbons in edible oils (adoption of standard of the same name DIN EN ISO 16035, November 2005 edition) (Restriction: *Here only measurement*)	HHAW
ASU L 17.00–12 1999–11	Analysis of foodstuffs – Determination of butyric acid as methyl ester in fat from bread including small baked products made of bread dough (Restriction: *Here only measurement*)	HHAW
ASU L 53.00–1 1999–11	Analysis of foodstuffs – Gas chromatographic determination of ethylene oxide and 2–chloroethanol in spices (Restriction: *Here only measurement*)	HHAW
DGF C–VI 10a 2016	Gas chromatography: Analysis of fatty acids and fatty acid distribution	HM
In–house method HH–MA–M 03–011 2022–01	VOC and solvents in food and pharmaceutical samples using GC headspace (Restriction: *Here for foodstuffs; here only measurement*)	HHAW
In–house method HH–MA–M 03–027 2020–06	Essential oils in spices with GC–FID – Deviation: Matrix in special matrices) (Restriction: *Here only measurement*)	HHAW

2.10.2 Determination of ingredients, plant protection product residues and solvent residues using gas chromatography (GC) with mass selective detectors (GC–MS; GC–MS/MS) in foodstuffs **

ASU L 00.00–34 2010–09	Analysis of foodstuffs – Modular multiple analytical method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19) (Restriction: *Here only measurement*)	HHAW
ASU L 00.00–115 2018–10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean–up by dispersive SPE in plant–based foodstuffs – Modular QuEChERS method (adoption of standard of the same name DIN EN 15662, July 2018) (Restriction: *Here only measurement*)	HHAW
In–house method HH–MA–M 03–058 2020–07	PAH 15 measurement GC–MS/MS (Restriction: *Here only measurement*)	HHAW
In–house method HH–MA–M 03–061 2021–04	Phosphine (Restriction: *Here only measurement*)	HHAW
In–house method HH–MA–M 03–064 2021–09	Ethylene oxide/2–chloroethanol with QuEChERS – Processing and measurement (Restriction: *Here only measurement*)	HHAW

2.11 Determination of petroleum hydrocarbons by coupled liquid chromatography–gas chromatography (LC–GC) with conventional detectors (FID) in foodstuffs **

In–house method HH–MA–M 03–055 2017–06	MOSH_MOAH measurement LC–GC–FID	HHAW

2.12 Determination of parameters and ingredients by photometry in foodstuffs *

ASU L 01.00–26/1 2011–01	Analysis of foodstuffs – Determination of content of L and D–lactic acid (L and D–lactate) in milk and milk products – Enzymatic method (adoption of German standard of the same name DIN 10335, September 2010 edition) (R–Biopharm 11112821035: 2017–09)	HHGS, HM

ASU L 01.00–17 2016–10	Analysis of foodstuffs – Determination of lactose and galactose content of milk and milk products – Enzymatic method (adoption of standard of the same name DIN 10344, May 2015 edition) (R–Biopharm 10176303035: 2017–08)	HHGS, HM
ASU L 05.00–17 1992–12	Analysis of foodstuffs; determination of cholesterol content in eggs and egg products; enzymatic method (R–Biopharm: 10139050035: 2017–08)	HHGS
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)	HHGS
ASU L 07.00–14 2017–10	Analysis of foodstuffs –Determination of acetic acid (acetate) in meat products – Enzymatic method	HM
ASU L 07.00–60 2007–04	Analysis of foodstuffs – Determination of nitrate and/or nitrite content in meat products after enzymatic reduction of nitrate to nitrite – Spectrophotometric method (adoption of standard of the same name DIN EN 12014–3, August 2005 edition) (R–Biopharm 10905658035: 2019–11)	HHGS, HM
ASU L 13.00–15 2018–06	Analysis of foodstuffs – Animal and vegetable fats and oils – Determination of the anisidine number (adoption of the standard of the same name DIN EN ISO 6885, July 2016)	HM
ASU L 26.11.03–5 1983–05	Determination of citric acid in tomato purée (enzymatic method) (R–Biopharm 10139076035:2017–07)	HHGS, HM
ASU L 31.00–12 1997–01	Analysis of foodstuffs – Enzymatic determination of the content of D–glucose and D–fructose in fruit and vegetable juices – NADPH spectrometric method (adoption of standard of the same name DIN EN 1140, December 1994 edition, as a replacement for the previous official method L 31.00–12, November 1984 edition) (R–Biopharm 10716260035: 2017–11)	HHGS
ASU L 31.00–13 1997–09	Analysis of foodstuffs – Enzymatic determination of sucrose content in fruit and vegetable juices – NADP spectrometric method (adoption of standard of the same name DIN EN 12146, October 1996 edition, as a replacement for the previous official method L 31.00–13, November 1984 edition) (R–Biopharm 10716260035: 2017–11)	HHGS

ASTA 12.1 1997–01	Piperine in pepper, its oleoresins and seasoning mixes	HHGS
DGF C–VI 6e 2012	Anisidine number	HM

2.13 Determination of ingredients and characteristics by titrimetry in foodstuffs (*: HM,**: HHGS)

ISO 3976 2006–03	Milk fat – Determination of the peroxide value	HM
ASU L 00.00–46/1 1999–11	Analysis of foodstuffs – Determination of sulphite in foodstuffs – Part 1: Optimised Monier–Williams method (adoption of standard of the same name DIN EN 1988 Part 1, May 1998 edition)	HHGS
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	HHGS
ASU L 07.00–5/1 2010–01	Analysis of foodstuffs – Determination of salt content (sodium chloride) in meat products – Potentiometric endpoint determination	HHGS, HM
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	HHGS
ASU L 13.00–5 2012–01	Analysis of foodstuffs – Determination of acid number and acidity of animal and vegetable fats and oils (adoption of standard of the same name DIN EN ISO 660, October 2009 edition)	HHGS, HM
ASU L 13.00–40 2012–01	Analysis of foodstuffs – Determination of the peroxide value in animal and vegetable fats and oils – Potentiometric endpoint determination (adoption of the standard of the same name DIN EN ISO 27107, August 2010 edition)	HHGS, HM
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	HHGS, HM

ASU L 20.01/02–2 1980–05	Determination of total acidity in mayonnaise and emulsified sauces	HM
ASU L 26.04–4 1987–06	Analysis of foodstuffs; determination of titratable acids (total acidity) in the cover brine and press liquor for sauerkraut	HHGS, HM
ASU L 26.11.03–4 1983–05	Determination of the total acid content of tomato purée (potentiometric method)	HM
ASU L 52.01.01–4 1983–11	Determination of the total acid content of tomato ketchup and comparable products (potentiometric method)	HM
ASU L 52.04–2 1987–06	Analysis of foodstuffs; determination of titratable acids (total acid) in vinegar, with the exception of wine vinegar	HM
AOAC 965.33 2000	Peroxide Value of Oils and Fats; Titration Method	HM
DGF C–V 2, calc. oleic acid 2006	Acid value and free fatty acid content (acidity) – Determination in fats and oils	HHGS, HM
DGF C–VI 6a, Part 1 2005	Determination of Wheeler peroxide value	HHGS, HM
In–house method HH–MA–M 08–032 2016–10	Sugar in liquorice by titration	HHGS

2.14 Other physico–chemical analysis of foodstuffs

ASU L 06.00–15 1982–11	Detection of condensed phosphates in meat and meat products	HHGS
ASU L 17.00–5 2003–12	Analysis of foodstuffs – Determination of starch content in bread including small baked products made of bread dough	HHGS
ASU L 31.00–16 1997–09	Analysis of foodstuffs – Determination of the soluble dry matter content in fruit and vegetable juices – Refractometric method (adoption of standard of the same name DIN EN 12143, October 1996 edition)	HHGS

In–house method HH–MA–M 10–032 2021–06	Detection of starch, qualitative (Modification: *Here in foodstuffs*)	HHGS
In–house method HH–MA–M 11–006 2021–11	Lipase activity in fats and high–fat foodstuffs by colour reaction	HHGS

2.15 Microbiological analysis of foodstuffs

2.15.1 Determination of bacteria, yeasts and moulds in foodstuffs by cultural microbiological analysis (*: HHGS, **: S)

ISO 4831 2006–08	Microbiology – Horizontal method for the detection and enumeration of coliforms – MPN technique	HHGS
ISO 4832 2006–02	Microbiology – Horizontal method for the enumeration of coliforms – Colony–count technique	HHGS
DIN EN ISO 4833–01 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	HHGS
DIN EN ISO 4833–02 2014–05	Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 degrees C by the surface plating technique	HHGS
ISO 7251 2005–02	Microbiology of food and animal feeding stuffs – Horizontal method for the detection and enumeration of presumptive Escherichia coli – Most probable number technique	HHGS
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	HHGS
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	HHGS
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	HHGS

ASU L 00.00–20 2018–03	Analysis of foodstuffs – Horizontal method for the detection, enumeration and serotyping of Salmonella – Part 1: Detection of Salmonella spp. (adoption of standard of the same name DIN EN ISO 6579–1, July 2017) (Restriction: *Without Annex D*)	HHGS
ASU L 00.00–22 2018–03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. – Part 2: Enumeration method (adoption of standard of the same name DIN EN ISO 11290–2, September 2017)	HHGS
ASU L 00.00–32/1 2018–03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. – Part 1: Detection method (adoption of standard of the same name DIN EN ISO 11290–1, September 2017)	HHGS
ASU L 00.00–33 2006–09	Analysis of foodstuffs – Horizontal method for the enumeration of presumptive Bacillus cereus – Colony–count technique at 30 °C (adoption of standard of the same name DIN EN ISO 7932, March 2004 edition)	HHGS, S
ASU L 00.00–55 2004–12	Analysis of foodstuffs – Method for the enumeration of coagulase–positive staphylococci (Staphylococcus aureus and other species) in foodstuffs – Part 1: Technique using Baird–Parker agar medium (adoption of standard of the same name DIN EN ISO 6888–1, December 2003 edition)	HHGS
ASU L 00.00–55 2019–12	Analysis of foodstuffs – Method for the enumeration of coagulase–positive staphylococci (Staphylococcus aureus and other species) in foodstuffs – Part 1: Technique using Baird–Parker agar medium (adoption of standard of the same name DIN EN ISO 6888–1, December 2003 edition) (Modification: *Confirmation by DNAse detection and latex test*)	S
ASU L 00.00–57 2006–12	Analysis of foodstuffs – Methods for the enumeration of Clostridium perfringens in foodstuffs – Colony–count technique (adoption of standard of the same name DIN EN ISO 7937, November 2004 edition) (Modification S*: Confirmation by testing for acid phosphatase*)	HHGS, S
ASU L 00.00–88/1 2015–06	Analysis of foodstuffs – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 degrees C by the pour plate technique (adoption of standard of the same name DIN EN ISO 4833–1, December 2013 edition)	HHGS

ASU L 00.00–88/2 2015–06	Analysis of foodstuffs – Horizontal method for the enumeration of microorganisms – Part 2: Colony count at 30 degrees C by the surface plating technique (adoption of standard of the same name DIN EN ISO 4833–2, May 2014 edition)	HHGS, S
ASU L 00.00–132/2 2010–09	Analysis of foodstuffs – Horizontal method for the enumeration of β–glucuronidase–positive Escherichia coli in foodstuffs – Part 2: Colony–count technique with 5–bromo–4–chloro–3–indolyl β–d–glucuronic acid (adoption of standard of the same name DIN ISO 16649–2, December 2009 edition)	HHGS, S
ASU L 00.00–133/1 2018–03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 1: Detection of Enterobacteriaceae (adoption of standard of the same name DIN EN ISO 21528–1, September 2017)	HHGS
ASU L 00.00–133/2 2010–09	Analysis of foodstuffs – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 2: Colony–count technique (adoption of standard of the same name DIN EN ISO 21528–2, September 2017)	HHGS
ASU L 01.00–37 1991–12	Analysis of foodstuffs – Determination of the number of yeasts and moulds in milk and milk products; reference method	HHGS
ASU L 06.00–35 2017–10	Analysis of foodstuffs – Determination of aerobically growing lactic acid bacteria in meat and meat products – Spatula method (reference method) (adoption of standard of the same name DIN 10109, May 2016 edition)	S
ASU L 06.00–43 2011–06	Analysis of foodstuffs – Enumeration of Pseudomonas spp. in meat and meat products (adoption of standard of the same name DIN EN ISO 13720, December 2010 edition)	HHGS, S
ASU L 20.01–10 1992–12	Analysis of foodstuffs – Determination of lactic acid bacteria growing under aerobic conditions in mayonnaises, emulsified sauces and cold ready–made sauces – Spatula method (reference method)	S
SALMA™ One Day bioMérieux 2017/04 REF 418246/418247 (selective medium) 2017/04	Detection of Salmonella spp. in foodstuffs, feedstuffs and environmental samples (Restriction: *Here foodstuffs*)	S

CampyFood® bioMérieux 03–17 42643 (enrichment) 2015/09	Enrichment of Campylobacter spp. in meat products and environmental samples (Restriction: *Here meat products*)	S
CampyFood® bioMérieux 03–17 43471 (Selective medium) 2018/09	Detection of Campylobacter spp. in meat products and environmental samples (Restriction: *Here meat products*)	S
Listeria Precis™ Oxoid 2008 CM1066 (enrichment) 2017–02	Enrichment of Listeria monocytogenes in foodstuffs, feedstuffs and environmental samples (Restriction: *Here foodstuffs*)	S
Listeria Precis™ Oxoid 2008 SR0234B (selective supplement) 2011–05	Detection of Listeria monocytogenes in foodstuffs, feedstuffs and environmental samples (Restriction: *Here foodstuffs*)	S
Listeria Precis™ Oxoid 2008 PO5165A (selective medium) 2019–04	Confirmation of Listeria monocytogenes in foodstuffs, feedstuffs and environmental samples (Restriction: *Here foodstuffs*)	S
Listeria Precis™ Oxoid 2008 PO5165A (selective agar) 2019–04	Enumeration and confirmation of Listeria monocytogenes in foodstuffs, feedstuffs and environmental samples (Restriction: *Here foodstuffs*)	S
In–house method IPDP 20440/002 2020–03	Determination of Enterobacteriaceae	S
In–house method IPDP 21692/001 2020–03	Determination of yeasts and moulds	S

2.15.2 Determination of bacteria in foodstuffs by microscopy

In–house method IPDP 6155/004 2015–09	Microscopy – Visual examination and germ differentiation of foodstuffs by microscopy	S

2.15.3 Microbiological test systems

ASU L 00.00–87 2004–06	Analysis of foodstuffs – Determination of folate by microbiological assay (adoption of standard of the same name DIN EN 14131. September 2003 edition) (R–Biopharm P 1001:2016–10)	HHGS
SLMB 62/9.2.1 2000–03	Vitamin B 12 by microbiological testing (R–Biopharm P1002:2017–02)	HHGS
SLMB 62/10.2.1 2000–03	Biotin by microbiological testing (R–Biopharm P 1003:2016–10)	HHGS
SLMB 62/12.2.1 2000–03	Niacin by microbiological testing (R–Biopharm P 1004:2016–10)	HHGS
SLMB 62/13.2.1 2000–03	Pantothenic acid by microbiological testing (R–Biopharm P 1005:2016–10)	HHGS

2.16 Determination of bacteria, allergens and genetically modified organisms in foodstuffs by real–time PCR (*: HM)

ASU L 00.00–95V 2006–12	Analysis of foodstuffs – Qualitative detection of Listeria monocytogenes in foodstuffs – PCR method (BAX® System Real–Time PCR Assay L. monocytogenes Part KIT 2005)	HHGS
ASU L 00.00–98 2007–04	Analysis of foodstuffs – Qualitative detection of salmonella in foodstuffs – Real–time PCR method (BAX® System Real–Time PCR Assay Salmonella Part KIT 2006)	HHGS
Dupont BAX System HYBKIT2012 2018–02	BAX® System PCR Assay for Salmonella Part KIT2012	HHGS

CONGEN Sure Food® GMO Screen 4plex 35S/NOS/FMV+IAC S2126 2021–09	Qualitative screening for genetically modified organisms (GMOs) in foodstuffs, feedstuffs and seeds by real–time PCR (Restriction: *Here for foodstuffs*)	HM
CONGEN Sure Food® ALLERGEN-Soya S3601 2019–04	Qualitative and quantitative detection of soy DNA in foodstuffs by real–time PCR	HM
CONGEN Sure Food® ALLERGEN Almond S3604 2018–01	Qualitative and quantitative detection of almond DNA in foodstuffs by real–time PCR	HM
CONGEN Sure Food® ALLERGEN Walnut S3607 2018–01	Qualitative and quantitative detection of walnut DNA in foodstuffs by real–time PCR	HM
CONGEN Sure Food® ALLERGEN Sesame S3608 2018–01	Qualitative and quantitative detection of sesame DNA in foodstuffs by real–time PCR	HM
CONGEN Sure Food® ALLERGEN Mustard S3609 2018–01	Qualitative and quantitative detection of DNA from brown (Brassica juncea), yellow (Sinapis alba) and black mustard (Brassica nigra) and black walnut (Juglans nigra) by real–time PCR in foodstuffs	HM
CONGEN Sure Food® ALLERGEN Fish S3610 2018–01	Qualitative and quantitative detection of fish DNA in foodstuffs by real–time PCR	HM
CONGEN Sure Food® ALLERGEN Lupin S3611 2018–01	Qualitative and quantitative detection of lupin DNA in foodstuffs by real–time PCR	HM

CONGEN Sure Food® ALLERGEN Macadamia S3616 2018–01	Qualitative and quantitative detection of macadamia DNA in foodstuffs by real–time PCR	HM
CONGEN Sure Food® ALLERGEN Brazil Nut S3617 2018–01	Qualitative and quantitative detection of Brazil nut DNA in foodstuffs by real–time PCR	HM
CONGEN Sure Food® ALLERGEN Pecan S3618 2018–01	Qualitative and quantitative detection of pecan DNA in foodstuffs by real–time PCR	HM
CONGEN Sure Food® ANIMAL ID Pork SENS PLUS S6017 2018–01	Qualitative detection of porcine DNA in foodstuffs by real–time PCR	HM
BIOTECON foodproof® Peanut Detection Kit R 302 63 2017–06	Qualitative and quantitative detection of peanut DNA in foodstuffs by real–time PCR	HM
BIOTECON foodproof® Hazelnut Detection Kit R 302 62 2017–06	Qualitative and quantitative detection of hazelnut DNA in foodstuffs by real–time PCR	HM
BIOTECON foodproof® Celery Detection Kit R 302 60 2017–06	Qualitative and quantitative detection of celery DNA in foodstuffs by real–time PCR	HM

2.17 Quantitative determination of allergens by enzyme immunoassay (ELISA) in foodstuffs *

R Biopharm RIDASCREEN Fast Mustard R6152 2016–11	Enzyme immunoassay for quantitative determination of mustard	HM
R Biopharm RIDASCREEN Gliadin R7001 2015–10	Enzyme immunoassay for quantitative determination of gliadins and related proteins	HM
R Biopharm RIDASCREEN Fast Milch/Milk R4652 2015–07	Enzyme immunoassay for quantitative determination of milk protein	HM
R Biopharm RIDASCREEN Fast Soya R7102 2016–07	Enzyme immunoassay for quantitative determination of soy proteins	HM
R Biopharm RIDASCREEN Fast Gliadin Sensitive R7051 2017–08	Enzyme immunoassay for determination of gliadins and related prolamins	HM
R Biopharm RIDASCREEN Peanut R6811 2021–02	Enzyme immunoassay for quantitative determination of peanut and peanut protein	HM
BIOTECON Immunolab Mandel / Almond ELISA ALM–E01/E04 2019–02	Enzyme immunoassay for qualitative and quantitative determination of almond in foodstuffs	HM

BIOTECON Immunolab Eiklar/ EGG White ELISA EGG–E01/E04 2019–02	Enzyme immunoassay for qualitative and quantitative determination of egg/egg protein in foodstuffs	HM
BIOTECON Immunolab Lupin(e) ELISA LUP–E01/E04 2021–01	Enzyme immunoassay for quantitative determination of lupine in foodstuffs	HM

2.18 Optical inspection of foodstuffs

In–house method HH–MA–M 10–035 2021–11	Nematodes in fish by visual inspection or digestion	HHGS

2.19 Irradiation testing of foodstuffs

ASU L 00.00–82 2010–09	Analysis of foodstuffs – Detection of irradiated food using photostimulated luminescence (adoption of standard of the same name DIN EN 13751, November 2009 edition)	HHGS

3 Feedstuffs

3.1 Sample pretreatment, preparation and processing of feedstuffs

3.1.1 Extractions for physico–chemical analysis **

ASU L 00.00–49/2 1999–11	Analysis of foodstuffs – Non–fatty foods – Determination of dithiocarbamate and thiuram disulfide residues – Part 2: Gas chromatographic method (adoption of standard of the same name DIN EN 12396 Part 2, December 1998 edition) (Modification: *Here in feedstuffs; here only sample processing*)	HHGS

ASU L 00.00–115 2018–10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean–up by dispersive SPE in plant–based foodstuffs – Modular QuEChERS method (adoption of standard of the same name DIN EN 15662, July 2018) (Modification: *Here in feedstuffs; here only sample processing*)	HHGS
In–house method HH–MA–M 09–020 2021–10	Glyphosate/AMPA/glufosinate – Processing (Modification: *Here in feedstuffs)*	HHGS
In–house method HH–MA–M 09–022 2021–09	Polar pesticides – Processing (Modification: *Here in feedstuffs)*	HHGS
In–house method HH–MA–M 02–145 2018–03	Fenbutatin oxide – Processing, measurement with LC–MS/MS (Modification: *Here in feedstuffs; here only sample processing*)	HHGS
In–house method HH–MA–M 03–058 2019–09	PAH 15 measurement GC–MS/MS (Restriction: *Here only in feedstuffs; here only sample processing*)	HHGS

3.1.2 Digestions for elemental analysis *

ASU L 00.00–19/1 2015–06	Analysis of foodstuffs – Determination of trace elements in foodstuffs – Pressure digestion (adoption of standard of the same name DIN EN 13805, December 2014 edition) (Modification: *Matrix feedstuffs*)	HHGS

3.1.3 Extraction of DNA for molecular biological analysis of feedstuffs (*: HM)

CONGEN Surefood® PREP Basic Article no. S1052 2017–03	Extraction of plant and animal DNA (deoxyribonucleic acid) from raw materials and from slightly processed foods and feed as well as for the extraction of animal DNA from highly processed food and feed (Restriction: *Here for feedstuffs*)	HM

CONGEN Surefood® PREP Advanced Article no. S1053 2017–03	Extraction of plant and animal DNA (deoxyribonucleic acid) using two different protocols: 1. Sensitive extraction of plant and animal DNA of allergens from food 2. Extraction of plant DNA from highly processed food and feed as well as from samples that produce an inhibition in the DNA when extracted with protocol 1 (Restriction: *Here for feedstuffs*)	HM

3.2 Determination of the stocking rate by simple visual examinations of feedstuffs

In–house method HH–MA–M 10–014 2021–06	Optical findings (Modification: *Here in feedstuffs)*	HHGS

3.3 Gravimetric analysis of physico–chemical indicators and ingredients in feedstuffs *

ASU L 16.01–1 2008–12	Analysis of foodstuffs – Determination of moisture content in cereal flour (Modification: *Here in feedstuffs)*	HM
ASU L 16.01–2 2008–12	Analysis of foodstuffs – Determination of ash in cereal flour (Modification: *Here in feedstuffs)*	HM
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 (Modification: *Here in feedstuffs)*	HM

3.4 Determination of water activity by electrode measurement in feedstuffs **

In–house method HH–MA–M 11–008 2021–06	a_W–value measurement	HHGS

3.5 Determination of elements in feedstuffs

3.5.1 Determination of elements using inductively coupled plasma atomic emission spectrometry (ICP–OES) in feedstuffs *

ASU L 00.00–144 2019–07	Analysis of foodstuffs – Determination of calcium, copper, iron, magnesium, manganese, phosphorus, potassium, sodium, sulphur and zinc in foodstuffs by ICP–OES (adoption of standard of the same name DIN EN 16943, July 2017) (Modification: *Matrix feedstuffs*) (Restriction: *Measurement only*)	PI

3.5.2 Determination of elements by inductively coupled plasma mass spectrometry (ICP–MS) in feedstuffs *

ASU L 00.00–135 2011–01	Analysis of foodstuffs – Determination of arsenic, cadmium, mercury and lead in foodstuffs by ICP–MS after pressure digestion (adoption of standard of the same name, DIN EN 15763, April 2010 edition) (Modification: *Matrix feedstuffs*) (Restriction: *Measurement only*)	PI

3.6 Liquid chromatographic analyses of feedstuffs

3.6.1 Determination of organic contaminants by liquid chromatography (LC) with conventional detectors (DAD, FLD) in feedstuffs **

ASU L 15.03–1 2010–01	Analysis of foodstuffs – Determination of ochratoxin A in barley – HPLC method with clean–up on an immunoaffinity column (adoption of standard of the same name DIN EN 14132, September 2009 edition) (Modification: *Here in feedstuffs*)	HHGS
ASU L 23.05–3 2014–02	Analysis of foodstuffs – Determination of aflatoxin B1 and the sum of aflatoxin B1, B2, G1 and G2 in nuts and related products – High performance liquid chromatographic method (adoption of standard of the same name DIN EN ISO 16050, September 2011 edition) (Modification: *Here in feedstuffs*)	HHGS
In–house method HH–MA–M 02–105 2022–01	PAHs in foodstuffs and feedstuffs with HPLC–FLD (Restriction: *Here feedstuffs*)	HHGS

3.6.2 Determination of plant protection product residues using gas chromatography (LC) with mass spectrometry (MS/MS) in feedstuffs **

ASU L 00.00–115 2018–10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean–up by dispersive SPE in plant–based foodstuffs – Modular QuEChERS method (adoption of standard of the same name DIN EN 15662, July 2018) (Modification: *Here in feedstuffs; here only measurement*)	HHAW
In–house method HH–MA–M 02–145 2018–03	Fenbutatin oxide – Processing, measurement with LC–MS/MS (Modification*:here in feedstuffs; here only measurement*)	HHAW
In–house method HH–MA–M 02–155 2019–09	Polar pesticides – LC–MS/MS measurement (Modification: *Here in feedstuffs*)	HHAW
In–house method HH–MA–M 02–156 2021–10	Glyphosate/AMPA/glufosinate LC–MS/MS measurement (Modification: *Here in feedstuffs*)	HHAW

3.6.3 Determination of organic contaminants using gas chromatography (LC) with mass spectrometry (MS/MS) in feedstuffs **

In–house method HM–MA–M 02–013 2018–08	Fumonisins, LC–MS/MS measurement (Modification: *Here in feedstuffs*)	HM

3.7 Determination of plant protection product residues and polycyclic aromatic hydrocarbons by gas chromatography (GC) with mass selective detectors (MS, MS/MS) in feedstuffs *

ASU L 00.00–49/2 1999–11	Analysis of foodstuffs – Non–fatty foods – Determination of dithiocarbamate and thiuram disulfide residues – Part 2: Gas chromatographic method (adoption of standard of the same name DIN EN 12396 Part 2, December 1998 edition) (Modification: *Here in feedstuffs; here only measurement*)	HHAW

ASU L 00.00–115 2018–10	Analysis of foodstuffs – Multiple analytical method for the determination of pesticide residues using GC and LC after acetonitrile extraction/partitioning and clean–up by dispersive SPE in plant–based foodstuffs – Modular QuEChERS method (adoption of standard of the same name DIN EN 15662, July 2018) (Modification: *Here in feedstuffs; here only measurement*)	HHAW
In–house method HH–MA–M 03–058 2019–09	PAH 15 measurement GC–MS/MS (Restriction: *Here only in feedstuffs; here only measurement*)	HHAW

3.8 Determination of Salmonella by cultural microbiological analyses of feedstuffs *

ASU L 00.00–20 2018–03	Analysis of foodstuffs – Horizontal method for the detection, enumeration and serotyping of Salmonella – Part 1: Detection of Salmonella spp. (adoption of standard of the same name DIN EN ISO 6579–1, July 2017) (Modification: *Here in feedstuffs*) (Restriction: *Without Annex D*)	HHGS

3.9 Determination of allergens by enzyme immunoassay (ELISA) in feedstuffs *

R Biopharm RIDASCREEN Fast Mandel / Almond R6901 2015–07	Enzyme immunoassay for quantitative determination of almond (Modification: *Here in feedstuffs*)	HM
R Biopharm RIDASCREEN Fast Senf / Mustard R6152 2016–11	Enzyme immunoassay for quantitative determination of mustard (Modification: *Here in feedstuffs*)	HM
R Biopharm RIDASCREEN Gliadin R7001 2015–10	Enzyme immunoassay for quantitative determination of gliadins and related proteins (Modification: *Here in feedstuffs*)	HM

R Biopharm RIDASCREEN Fast Erdnuss / Peanut R6202 2016–03	Enzyme immunoassay for quantitative determination of peanut (Modification: *Here in feedstuffs*)	HM
R Biopharm RIDASCREEN Fast Milch / Milk R4652 2015–07	Enzyme immunoassay for quantitative determination of milk protein (Modification: *Here in feedstuffs*)	HM
R Biopharm RIDASCREEN Fast Soya R7102 2016–07	Enzyme immunoassay for quantitative determination of soy proteins (Modification: *Here in feedstuffs*)	HM
R Biopharm RIDASCREEN Fast Egg Protein R6402 2015–12	Enzyme immunoassay for quantitative determination of whole egg (powder) (Modification: *Here in feedstuffs*)	HM

1.1.1 3.10 Determination of genetically modified organisms (GMOs) and allergens by real–time PCR in feedstuffs *

CONGEN Sure Food® GMO Screen 4plex 35S/NOS/FMV+IAC S2126 Version 1.3	Qualitative screening for genetically modified organisms (GMOs) in foodstuffs, feedstuffs and seeds by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN ID Soya 3101 Version 2.2	Qualitative and quantitative detection of soy DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Hazelnut S3602 2018–01	Qualitative and quantitative detection of hazelnut DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Almond S3604 2018–01	Qualitative and quantitative detection of almond DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM

CONGEN Sure Food® ALLERGEN Celery S3605 2018–01	Qualitative and quantitative detection of celery DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Walnut S3607 2018–01	Qualitative and quantitative detection of walnut DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Sesame S3608 2018–01	Qualitative and quantitative detection of sesame DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Mustard S3609 2018–01	Qualitative and quantitative detection of DNA from brown (Brassica juncea), yellow (Sinapis alba) and black mustard (Brassica nigra) and black walnut (Juglans nigra) in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Fish S3610 2018–01	Qualitative and quantitative detection of fish DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Lupin S3611 2018–01	Qualitative and quantitative detection of lupine DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Macadamia S3616 2018–01	Qualitative and quantitative detection of macadamia DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Brazil Nut S3617 2018–01	Qualitative and quantitative detection of Brazil nut DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ALLERGEN Pecan S3618 2018–01	Qualitative and quantitative detection of pecan DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM
CONGEN Sure Food® ANIMAL ID Pork SENS PLUS S6017 2018–01	Qualitative detection of porcine DNA in feedstuffs by real–time PCR (Restriction: *Here only in feedstuffs*)	HM

3.11 Qualitative detection in feedstuffs

In–house method HH–MA–M 10–032 2021–06	Detection of starch, qualitative (Modification: *Here in feedstuffs*)	HHGS

4 Determination of bacteria by cultural microbiological analysis of environmental samples, fitment and utensils in food areas *

ASU B 80.00–3 1998–01	Investigation of commodities – Determination of surface colony count on fitment and utensils in food areas – Part 3: Semi–quantitative method with culture media laminated taking–up equipment (squeeze method) (adoption of the eponymous German standard DIN 10113–3, July 1997 edition)	S
ASU B 80.00–5 2019–02	Analysis of commodity goods – Microbiology of the food chain – Horizontal method for surface sampling (adoption of standard of the same name DIN EN ISO 18593, October 2018 edition)	S
In–house method IPDP 21756/002 2020–07	Determination of surface colony count on fitment and utensils in food areas using the squeeze method (application for sender samples)	S
Oxoid Listeria Precis™ CM1066 (enrichment) 17/02/17	Enrichment of Listeria monocytogenes in foodstuffs, feedstuffs and environmental samples (Restriction: *Here for environmental samples, fitment and utensils in food areas*)	S
Oxoid Listeria Precis™ SR0234B (selective supplement) 06/05/11	Detection of Listeria monocytogenes in foodstuffs, feedstuffs and environmental samples (Restriction: *Here for environmental samples, fitment and utensils in food areas*)	S
Oxoid Listeria Precis™ PO5165A (selective medium) 01/04/19	Confirmation of Listeria monocytogenes in foodstuffs, feedstuffs and environmental samples (Restriction: *Here for environmental samples, fitment and utensils in food areas*)	S

bioMérieux SALMA™ One Day 418246/418247 2017–04	Detection of Salmonella spp. in foodstuffs, feedstuffs and environmental samples (Restriction: *Here for environmental samples, fitment and utensils in food areas*)	S
bioMérieux CampyFood® 42643 (enrichment) 2015/09	Enrichment of Campylobacter spp. in meat products and environmental samples (Restriction: *Here for environmental samples, fitment and utensils in food areas*)	S
bioMérieux CampyFood® 43471 (selective medium) 2018/09	Detection of Campylobacter spp. in meat products and environmental samples (Restriction: *Here for environmental samples, fitment and utensils in food areas*)	S

Abbreviations used

ASU	Amtliche Sammlung von Untersuchungsverfahren (Official Collection of Test Methods)
CEN/TS	European Committee for Standardization / Technical Specifications
DIN	Deutsches Institut für Normung e.V. (German Institute for Standardization)
DIN SPEC	A kind of prestandard (SPEC for specification)
DGF	Deutsche Gesellschaft für Fettwissenschaft e.V. (German Society for Fat Research)
EGA IGC	European Industrial Gases Association
EN	European standard
In–house method ST–MA–M xx–yyy	In–house method of GBA Gesellschaft für Bioanalytik mbH
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
VDI	Verein deutscher Ingenieure (Association of German Engineers)