Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-14115-02-04 according to DIN EN ISO/IEC 17025:2018

Valid from: **01.04.2021**

Date of issue: 24.09.2021

Holder of certificate:

SGS INSTITUT FRESENIUS GmbH
Engesserstraße 4b, 79108 Freiburg

Tests in the fields:

Physico-chemical, chemical, sensory, microbiological, immunological and molecular biological analysis of foodstuffs;
Selected physico-chemical, chemical and molecular biological analysis of feedstuffs
Selected chemical analysis of cosmetics;
Selected qualitative analysis of animal tissues and excretions;
Microbiological analysis of mineral water, spring water and bottled water;
Microbiological analysis in accordance with the German Drinking Water Ordinance;
Sampling of raw and drinking water

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories. Laboratories that conform to the requirements of this standard, operate generally in accordance with the principles of DIN EN ISO 9001.

The certificate together with the annex 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/en/content/accredited-bodies-dakks.

Within the specified test fields, the testing laboratory is permitted to do the following without obtaining prior notification and consent from DAkkS GmbH

1) **Freely select standard test methods or equivalent test methods.**
2) **Modify test methods and develop new test methods.**

The testing laboratory is permitted to apply standardised or equivalent test methods with different versions of the standards without obtaining prior notification and consent from DAkkS.

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.

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1 Analysis of foodstuffs

1.1 Determination of trace elements with the atomic absorption spectrometry (AAS) hydride system and graphite furnace in foodstuffs

ASU L 07.00-56 2000-07	Determination of sodium in meat products
ASU L 31.00-10 1997-01	Determination of sodium, potassium, calcium and magnesium contents in fruit and vegetable juices - Atomic absorption spectrometric method (AAS)
In-house method SOP M 1531 2020-10	Determination of Mg, Ca, K, Na in fruit juices, wines and foodstuffs by flame AAS

1.2 Determination of ingredients in foodstuffs by gas chromatography with conventional detectors (FID detector) [2]

DGF C-VI 10 a (00) 2000	Gas chromatography - Analysis of fatty acids; esterification with trimethylsulfonium hydroxide
In-house method SOP M 1570 2011-08	Analysis of ingredients in spirits by GC-FID

1.3 Determination of ingredients and contaminants in foodstuffs by gas chromatography with mass selective detectors (MS detector) [2]

ASU L 00.00-106 2006-12	Analysis of foodstuffs - Determination of the concentrations and enantiomeric ratios of chiral flavouring substances in foodstuffs
Resolution OIV-Oeno 11-2007 2007 OIV-MA-AS315-15	Determination of 3-methoxypropane-1,2-diol and cyclic diglycerols (by-products of technical glycerol) in wine by GC-MS (Modification: *Extension to determination of ethylene glycol and diethylene glycol, determination after silylation*)
In-house method SOP M 1565 2016-03	Determination of ethyl carbamate in stone fruit spirits by GC-MSMS

1.4 Determination of ingredients, additives and residues in foodstuffs by liquid chromatography with conventional detectors (DAD, UV-VIS, FID, RID detector) [2]

ASU L 00.00-9 1984-11	Analysis of foodstuffs - Determination of preservatives in low-fat foodstuffs
ASU L 00.00-10 1984-11	Analysis of foodstuffs - Determination of preservatives in high-fat foodstuffs
ASU L 10.00-5 1999-11	Analysis of foodstuffs - Determination of the content of biogenic amines in fish and fish products - Determination by high pressure liquid chromatography; reference method
SLMB 1391.1 2015	Determination of biogenic amines in milk, fish, cheese, raw sausage, raw cured products, sauerkraut and wine

ASU L 31.00-19 1997-09	Analysis of foodstuffs - Determination of hesperidin and naringin in fruit and vegetable juices
ASU L 46.00-3 2013-08	Analysis of coffee and coffee products - Determination of caffeine content - Reference method
ASU L 47.00-6 2014-02	Analysis of foodstuffs - Analysis of tea - Determination of caffeine content; HPLC method
IFU Analysis No. 17a 2005	Determination of ascorbic acid by HPLC - Total vitamin C content after reduction
In-house method SOP M 1509 2013-11	Determination of organic acids in wine and juices by HPLC-DAD
In-house method SOP M 2284 2013-07	Determination of ergosterol in fruit and vegetable juices by HPLC

1.5 Determination of ingredients, residues and pharmacologically active substances in foodstuffs by liquid chromatography with mass selective detectors (MS/MS detector) [2]

In-house method SOP M 1510 2018-01	Determination of melamine (and aminopterin) in animal feedstuffs and foodstuffs by hydrophilic interaction chromatography and tandem MS (HILIC-HPLC-MS/MS)
In-house method SOP M 1516 2010-09	Screening method for the determination of pharmacologically active substances in foodstuffs of animal origin by LC-MS/MS - Muscle, fish and seafood version
In-house method SOP M 1563 2015-09	Determination of sweeteners in foodstuffs by LC-MS/MS
In-house method SOP M 2282 2013-08	Determination of thiamphenicol and chloramphenicol in foodstuffs of animal origin by LC-MS/MS
In-house method SOP M 2303 2020-01	Determination of authenticity for bourbon vanilla as well as ethyl vanillin and piperonal in confectionery, ice cream and flavours by LC-MS/MS

1.6 Determination of ingredients and additives in by using thin-layer chromatography [1]

ASU L 06.00-15 2002-12	Detection of condensed phosphates in meat and meat products
ASU L 26.11.03-14 1983-11	Detection of water-soluble colourants in tomato purée, tomato ketchup and similar products

1.7 Determination of ingredients and additives in foodstuffs by photometry [2]

ASU L 01.00-17 2016-10	Determination of lactose and galactose content of milk and milk products - Enzymatic method
ASU L 01.00-26 2011-01	Analysis of foodstuffs - Determination of content of L and D-lactic acid (L and D-lactate) in milk and dairy products - Enzymatic method
ASU L 02.00-12 2009-06	Analysis of foodstuffs - etermination of the content of sucrose and glucose in milk products and ice cream - Enzymatic method
ASU L 06.00-8 2017-10	Determination of hydroxyproline content in meat and meat products
ASU L 06.00-9 2008-06	Analysis of foodstuffs - Determination of total phosphorus content in meat and meat products - Photometric method
ASU L 07.00-12 1990-12	Analysis of foodstuffs - Determination of nitrite and nitrate content in meat products
ASU L 07.00-13 2017-10	Analysis of foodstuffs - Determination of citric acid (citrate) in meat products - Enzymatic method
ASU L 07.00-14 2017-10	Analysis of foodstuffs -Determination of acetic acid (acetate) in meat products - Enzymatic method
ASU L 07.00-15 2017-10	Analysis of foodstuffs - Determination of D- and L-lactic acid (D- and L-lactate) in meat products - Enzymatic method
ASU L 17.00-7 1983-11	Determination of lactose in bread including small baked products made of bread dough

ASU L 17.00-16 1990-06	Analysis of foodstuffs - Determination of acetic acid (acetate) in bread including small baked products made of bread dough
ASU L 18.00-14 1994-05	Analysis of foodstuffs - Determination of D-sorbitol in pastries
ASU L 26.11.03-5 1983-05	Determination of citric acid in tomato purée (enzymatic method)
ASU L 31.00-6 1997-01	Analysis of foodstuffs - Determination of phosphorus content in fruit and vegetable juices - Spectrophotometric method
ASU L 31.00-9 1997-01	Analysis of foodstuffs - Enzymatic determination of the content of D-isocitric acid in fruit and vegetable juices - Spectrophotometric determination of NADPH
ASU L 31.00-12 1997-01	Analysis of foodstuffs - Enzymatic determination of contents of D-glucose and D-fructose in fruit and vegetable juices - Spectrophotometric determination of NADH
ASU L 31.00-13 1997-09	Analysis of foodstuffs - Enzymatic determination of sucrose content in fruit and vegetable juices - Spectrophotometric method with NADP
ASU L 31.00-14 1997-01	Analysis of foodstuffs - Enzymatic determination of citric acid content (citrate) in fruit and vegetable juices - Spectrophotometric determination of NADH
ASU L 31.00-15 1997-01	Analysis of foodstuffs - Enzymatic determination of the content of L-malic acid (L-malate) in fruit and vegetable juices - Spectrophotometric determination of NADH
ASU L 36.00-12 2002-12	Analysis of foodstuffs - Determination of ethanol in beer with low alcohol content
ASU L 44.00-6 1985-12	Analysis of foodstuffs - Determination of lactose in chocolate - Enzymatic method
ASU L 48.01-3 1985-05	Analysis of foodstuffs - Determination of sucrose, glucose and fructose in partially adapted milk-based infant formula
ASU L 48.02.07-2 1985-05	Analysis of foodstuffs - Determination of maltose in children’s rusks and rusk flour

ASU L 52.01.01-16 1983-11	Determination of acetic acid in tomato ketchup and comparable products (enzymatic method)
Dt. Lebensm. Rundschau 102nd Edition, Issue 5 2006	Determination of the monomer index in wines and juices
IFU Analyses No. 21 2005	Determination of L-malic acid (enzymatic)
IFU Analyses No. 22 2005	Determination of citric acid (enzymatic)
IFU Analyses No. 26 2005	Determination of pectin
IFU Analyses No. 50 2005	Determination of phosphate
IFU Analyses No. 52 2005	Determination of alcohol (enzymatic)
IFU Analyses No. 53 2005	Determination of lactic acid (enzymatic)
IFU Analyses No. 54 2005	Determination of D-isocitric acid (enzymatic)
IFU Analyses No. 55 2005	Determination of glucose and fructose (enzymatic)
IFU Analyses No. 56 2005	Determination of sucrose (enzymatic)
IFU Analyses No. 64 2005	D-Malic acid enzymatic
MEBAK Brautechn. Analysenmeth. Volume II, No. 2.13.2	Determination of colour in beer
OIV-MA-AS313-09 2015-07	Citric acid - Enzyme method

OIV-MA-AS313-07 2015-07	Lactic acid - Enzyme method
OIV-MA-AS313-11 2015-07	L-MALIC ACID - Enzyme method
OIV-MA-AS313-12 2015-07	D-MALIC ACID - Enzyme method
D-Sorbit/Xylit, R-biopharm, 10670057035 2014-02	Determination of D-sorbitol in non-alcoholic beverages (enzymatic)
Maltose/Saccharose/Glucose, R-biopharm, 11113950035 2014-04	Determination of maltose in foodstuffs, enzymatic
Ethanol, R-biopharm, 10176290035 2014-05	Determination of ethanol in foodstuffs (enzymatic)
In-house method SOP M 1518 2020-10	Enzymatic determination of sugars and organic acids in solid foodstuffs and beverages, determination of sugars in feedstuffs

1.8 Titrimetric determination of ingredients and additives [2]

ASU L 06.00-7 2014-08	Analysis of foodstuffs; determination of crude protein content in meat and meat products Kjeldahl titrimetric method - Reference method
ASU L 07.00-5/1 2010-01	Determination of salt content in meat and meat products
ASU L 20.01/02-2 1980-05	Determination of total acidity in mayonnaise and emulsified sauces
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
ASU L 26.11.03-4 1983-05	Determination of total acidity of tomato purée (potentiometric method)

ASU L 31.00-3 1997-09	Analysis of foodstuffs - Determination of the titratable acidity of fruit and vegetable juices
ASU L 31.00-8 1997-01	Analysis of foodstuffs - Determination of the formol number of fruit and vegetable juices
IFU Analyses No. 3 2005	Determination of titratable acids (total acids)
IFU Analyses No. 5 2005	Determination of volatile acids - Automatic steam distillation with the Vapodest
IFU Analysis No. 7a 2005	Determination of total sulphurous acid
IFU Analyses No. 30 2005	Determination of formol number
IFU Analyses No. 60 2005	Determination of centrifugable pulp
OIV-MA-AS313-01 2009	Determination of titratable acids (total acid)
OIV-MA- AS313-02 2009	Volatile acidity
Regulation (EC) No. 2074/2005 Annex II of 5 December 2005	Determination of the concentration of volatile basic nitrogen (TVB-) in fish and fishery products
Regulation (EEC) No 1234/2007 Annex 11 2007	Total acidity
Regulation (EEC) No 1234/2007 Annex 24	Free and total sulphur dioxide
In-house method SOP M 1545 2013-11	Determination of sulphurous acid in foodstuffs (Reith-Willems), titrimetric

In-house method SOP M 1556 2011-09	Determination of titratable acid (total acid) in foodstuffs, potentiometric

1.9 Determination of physico-chemical parameters and ingredients of foodstuffs

1.9.1 Determination of pH value in foodstuffs by electrode measurement 1

ASU L 06.00-2 1980-09	Measurement of pH in meat and meat products
IFU No. 11 2005	Determination of pH
OIV-MA-AS313-15 2019	pH value
SOP M 1535 2020-08	Determination of pH value at the Freiburg location

1.9.2 Determination of ingredients in foodstuffs by refractometry [2]

ASU L 26.11.03-1 1983-05	Determination of dry matter in tomato purée by refraction measurement
IFU Analyses No. 8 2005	Determination of the (dissolved) dry substance (indirect determination from refraction) (*The measurement is carried out between 16 °C and 24 °C*) (*The device automatically corrects the value to 20 °C*)
In-house method SOP M 1588 2011-08	Determination of dry matter of tomato purée, soluble dry matter in jams and sugar concentration or total refraction in preserves (refractometric)

1.9.3 Determination of quality-relevant indicators of foodstuffs using pressure and temperature measurement

In-house method SOP M 1546 2018-02	Determination of the concentration of dissolved carbon dioxide in beverages using the Steinfurth method

1.9.4 Determination of indicators in foodstuffs using temperature measurement [2]

In-house method SOP M 1233 2014-09	Determination of osmolality in foodstuffs
In-house method SOP M 1584 2011-04	Cryometric determination of the aw value in meat products

1.10 Determination of ingredients in foodstuffs by gravimetry [2]

ASU L 01.00-20 2013-08	Analysis of foodstuffs - Determination of fat content of milk and milk products by the Weibull-Berntrop gravimetric method
ASU L 01.00-27 1988-12	Analysis of foodstuffs; determination of the dry matter content of milk and cream; reference method
ASU L 03.00-9 2007-04	Analysis of foodstuffs - Determination of total dry matter of cheese and processed cheese - Reference method
ASU L 05.00-12 2012-01	Analysis of foodstuffs - Determination of dry matter in eggs and egg products
ASU L 05.00-13 1991-06	Analysis of foodstuffs - Determination of ash in eggs and egg products
ASU L 06.00-3 2014-08	Analysis of foodstuffs - Determination of water content in meat and meat products
ASU L 06.00-4 2017-10	Analysis of foodstuffs - determination of ash in meat and meat products
ASU L 16.01-1 2008-12	Analysis of foodstuffs - Determination of moisture content in cereal flour
ASU L 16.01-2 2008-12	Analysis of foodstuffs - Determination of ash in cereal flour
ASU L 17.00-3 2002-12	Determination of ash in bread including small baked products made of bread dough
ASU L 20.01/02-3 1980-05	Determination of dry matter in mayonnaise and emulsified sauces

ASU L 20.01/02-5 1980-05	Determination of total fat content in mayonnaise and emulsified sauces
ASU L 31.00-4 1997-01	Analysis of foodstuffs - Determination of ash in fruit and vegetable juices
ASU L 44.00-3 1985-12	Analysis of foodstuffs - Determination of dry matter content in solid chocolate
ASU L 44.00-4 1985-12	Analysis of foodstuffs - Determination of total fat content in chocolate
ASU L 46.02-6 2004-07	Analysis of foodstuffs - Determination of loss in mass of roasted ground coffee at 103 °C (routine method)
IFU Analyses No. 1 2005	Determination of relative density
IFU Analyses No. 9 2005	Determination of ash
OIV-MA-AS2-01A 2015-07	Density and relative density at 20 °C
OIV-MA-AS2-04 2009	Determination of ash
OIV-MA-AS312-01A 2009	Determination of alcohol; Alcoholic strength by volume (Resolution Oeno 377/2009)
In-house method SOP M 1520 2014-03	Gravimetric determination of fat according to Weibull-Stoldt in foodstuffs by hydrolysis unit and extraction unit
In-house method SOP M 1552 2011-07	Gravimetric determination of dry matter with the sea sand method
In-house method SOP M 2316 2011-12	Gravimetric determination of minerals in various foodstuffs

1.11 Determination of ingredients using IR spectroscopic methods [2]

ASU L 08.00-60 2014-08	Analysis of foodstuffs - Determination of crude protein, water, fat, ash and BEFFE contents in sausages, meat and meat products, near infrared spectroscopic method - Screening method (Here: *Only crude protein, water, fat*)
In-house method SOP M 1571 2013-08	Analysis of wine constituents with FTIR spectroscopy
In-house method SOP M 1578 2017-08	Determination of fat, protein and water in sausage and meat products by food scan (NIT spectroscopy)

1.12 Microbiological analysis

1.12.1 Preparation of samples for microbiological analysis [1]

DIN EN ISO 6887-2 2017-07	Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 2: Specific rules for the preparation of meat and meat products
DIN EN ISO 6887-3 2017-07	Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 3: Specific rules for the preparation of fish and fish products
DIN EN ISO 6887-4 2017-07	Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 4: Specific rules for the preparation of miscellaneous 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

DIN EN ISO 6887-6 2013-06	Microbiology of food and animal feeding stuffs - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 6: Specific rules for the preparation of samples taken at the primary production stage

1.12.2 Determination of bacteria, yeasts and moulds in foodstuffs using cultural microbiological methods [2]

ASU L 00.00-20 2018-03	Analysis of foodstuffs - Horizontal method for the detection of Salmonella ssp. in foodstuffs
ASU L 00.00-22 2018-03	Analysis of foodstuffs - Horizontal method for the detection and enumeration of Listeria monocytogenes - Part 2: Counting methods
ASU L 00.00-32/1 2018-03	Analysis of foodstuffs - Horizontal method for the detection and enumeration of Listeria monocytogenes - Part 1: Detection method
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
ASU L 00.00-57 2006-12	Analysis of foodstuffs - Method for the enumeration of Clostridium perfringens in foodstuffs - Colony-count technique
ASU L 00.00-88/1 2015-06	Analysis of foodstuffs - Horizontal method for the enumeration of microorganisms -- Colony-count technique at 30 degrees C
ASU L 01.00-37 1991-12	Determination of the number of yeasts and moulds in milk and dairy products; reference method
ASU L 01.00-54 1992-12	Determination of Escherichia coli in milk and milk products - Fluorescence-optical technique with parallel determination of coliform bacteria
ASU L 05.00-5 1990-06	Determination of Enterobacteriaceae in eggs, egg products, mayonnaises, emulsified sauces and cold ready-made sauces - Reference method

ASU L 06.00-18 2017-10	Analysis of foodstuffs - Determination of aerobic bacterial count at 30 °C in meat and meat products - Spatula and pour plate method (reference method)
ASU L 06.00-32 2018-10	Determination of Enterococcus faecalis and Enterococcus faecium in meat and meat products - Spatula method (reference method)
DIN EN ISO 4833-1 2013-12	Microbiology of the food chain - Horizontal method for the enumeration of microorganisms - Part 1: Colony count at 30 degrees C by the pour plate technique
DIN EN ISO 7932 2005-03	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of presumptive Bacillus cereus - Colony-count technique at 30 degrees C
DIN EN ISO 13720 2010-12	Meat and meat products - Enumeration of presumptive Pseudomonas spp.
DIN ISO 16649-2 2009-12	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of β-glucuronidase-positive Escherichia coli - Part 2: Colony-count technique at 44 °C using 5-bromo-4-chloro-3-indolyl β-D-glucuronide
DIN ISO 21528-2 2019-05	Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of Enterobacteriaceae - Part 2: Colony-count method
IFU MM 2 1996-04	Total number of potentially harmful microorganisms in fruits and related products
IFU MM 7 1998-10	“Sterility” testing of aseptically filled products, commercial sterile products, preserved products
ISO 4831 2006-08	Microbiology - Horizontal method for the detection and enumeration of coliforms - MPN technique
ISO 10272 2017-06	Microbiology of the food chain - Horizontal method for the detection and enumeration of Campylobacter spp. - Part 1: Detection method
ISO 15213 2003-5	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of sulphite-reducing bacteria growing under anaerobic conditions

ISO 15214 1998-08	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of mesophilic lactic acid bacteria - Colony-count technique at 30 degrees C
ISO 21527-1 2008-07	Horizontal method for the enumeration of yeasts and moulds - Part 1: Colony count technique in products with water activity greater than 0,95
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
MEBAK III 10.6 + 10.11.1 1996-01	Microbiological detection of bacteria harmful to beer in filterable beer (membrane filtration and microscopy)
MEBAK III 10.3.2.3 1996-01	Microbiological detection of bacteria harmful to beer in yeast-containing, turbid and non-filterable samples (enrichment and microscopy)
In-house method SOP M2234 2014-05	Microbiological determination of the number of yeasts and moulds in foodstuffs (pour plate method)
In-house method SOP M 2235 2019-01	Microbiological determination of aerobic lactic acid bacteria and acid-forming germs in meat, meat products and other foodstuffs (pour plate method)
In-house method SOP M 2244 2014-01	Microbiological determination of Pseudomonas spp. in foodstuffs (spatula method)
In-house method SOP M 2259 2011-06	Quantitative microbiological determination of acid-tolerant, heat-resistant microorganisms in fruit juices (pour plate method)
In-house method SOP M 2270 2011-08	Microbiological detection of yeasts, bacteria and moulds in filterable beer (membrane filtration and microscopy)

1.13 Microscopic examination of microorganisms

In-house method SOP M 2251 2011-08	Microscopic examination of microorganisms from foodstuffs

1.14 Determination of ingredients in foodstuffs by immunoassay (ELISA) [1]

ASU L 00.00-129 2010-01	Analysis of foodstuffs - Detection of salmonella by immunoassay *(Solus test kit*)
Solus Salmonella ELISA SAL-0096S; SAL-0480S Perkin Elmer 2020-01	Immunoassay-based Test System for the Detection of Salmonella in Foods and Environmental Samples AFNOR Validation No. SOL 37/01-06/13
EuroProxima 5091 2020-01	A competitive enzyme immunoassay for the screening and quantitative analysis of penicillins in various matrices

1.15 Determination of bacteria in foodstuffs using real-time PCR

Foodproof Campylobacter Quantification Kit - 5'Nuclease - R 302 05 2017-09	Campylobacter Quantification Kit

1.16 Sample preparation for real-time PCR analysis by extraction [2]

GeneSpin Cat. No. 5224400605 V9 2018-10	Kit for the isolation of high-quality DNA from foodstuff and feedstuff samples
In-house method SOP M 3196 2019-10	Sample preparation, homogenisation and DNA extraction for animal species identification using real-time PCR

1.17 Determination of animal species in foodstuffs using real-time PCR [1]

DNAnimal Screen Halal IPC (LR) Cat. No 5422221210 V3 2018-01	Test kit with 96 real-time PCR reactions for qualitative real-time PCR detection of porcine and equine/donkey DNA with IPC

DNAnimal Ident Beef IPC (LR/HR) Cat. No 5422220610 V5 2017-09	Test kit for the qualitative detection of bovine DNA, 96 real-time PCR reactions with IPC
DNAnimal Ident chicken IPC (LR) Cat. No 5422221010 V4 2017-12	Test kit for the qualitative detection of chicken DNA, 96 real-time PCR reactions with IPC

1.18 Sample preparation for NGS analysis by extraction [2]

NucleoSpin Food Macherey-Nagel 740945 Rev. 12 2017-03	DNA extraction
In-house method SOP M 3586 2018-06	DNA analysis in foodstuffs by NGS - Homogenisation of samples
In-house method SOP M 3588 2018-06	DNA analysis in foodstuffs by NGS - DNA extraction
In-house method SOP M 3589 2018-06	DNA analysis in foodstuffs by NGS - DNA extraction of plant samples

1.19 Non-targeted) determination of DNA in foodstuffs using sequencing (NGS) [1]

All Species ID Meat DNA Analyser, A38452, A388453 V1 2018-11	Meat DNA amplification by PCR and sequencing by next generation sequencing in foodstuff and feedstuff samples
All Species ID Fish DNA Analyser, A38454, A388455 V2 2018-11	Fish DNA amplification by PCR and sequencing by next generation sequencing in foodstuff and feedstuff samples

All Species ID Plant DNA Analyser, A38456, A388457 V2 2018-11	Plant DNA amplification by PCR and sequencing by next generation sequencing in foodstuff and feedstuff samples
In-house method SOP M 3591 2018-06	DNA analysis in foodstuffs by NGS - DNA quantification and dilution
In-house method SOP M 3592 2018-06	DNA analysis in foodstuffs by NGS - DNA amplification
In-house method SOP M 3593 2018-06	DNA analysis in foodstuffs by NGS - Library preparation
In-house method SOP M 3594 2018-06	DNA analysis in foodstuffs by NGS - Preparation chip and DNA sequencing

1.20 Sensory analysis of foodstuffs

1.20.1 Simple descriptive testing [1]

ASU L 00.90-6 2015-06	Analysis of foodstuffs - Sensory test methods - Basic descriptive test
DIN 10964 2014-11	Sensory analysis - Simple descriptive test

1.20.2 Special sensory testing [2]

ASU L 00.90-7 2007-12	Analysis of foodstuffs - Sensory test methods - Triangle test
DIN EN ISO 4120 2007-10	Sensory analysis - Methodology -Triangle test
DIN 10976 2016-08	Sensory analysis - Difference from Control Test (DfC test)
In-house method SOP M 2287 2016-02	Qualified sensory analysis of meat and sausage products
In-house method SOP M 3455 2017-04	Qualified sensory analysis of juice and soft drinks

In-house method SOP M 3456 2017-06	Qualified sensory analysis of wine and sparkling wine
In-house method SOP M 3457 2017-05	Qualified sensory analysis of cheese and cheese preparations
In-house method SOP M 3458 2017-05	Qualified sensory analysis of spirits
In-house method SOP M 3459 2017-05	Qualified sensory analysis of beer and shandies

2 Analysis of feedstuffs

2.1 Determination of ingredients and residues in feedstuffs by liquid chromatography with conventional detectors (DAD, FID, UV, VIS detectors) [2]

ASU L 10.00-5 1999-11	Analysis of foodstuffs - Determination of the content of biogenic amines in fish and fish products - Determination by high pressure liquid chromatography; reference method
SLMB 1391.1 2015	Determination of biogenic amines in milk, fish, cheese, raw sausage, raw cured products, sauerkraut and wine
In-house method SOP M 1522 2020-10	Quantitative determination of sorbic acid, benzoic acid, salicylic acid, pHB ester in foodstuffs, cosmetics and feedstuffs by HPLC
In-house method SOP M 1574 2016-08	Determination of biogenic amines in foodstuffs by HPLC *Application also to feedstuffs*)

2.2 Determination of contaminants, residues and pharmacologically active substances in feedstuffs by liquid chromatography with mass selective detectors (MS/MS detector) 2

In-house method SOP M 1510 2018-01	Determination of melamine (and aminopterin) in animal feedstuffs and foodstuffs by hydrophilic interaction chromatography and tandem MS (HILIC-HPLC-MS/MS)
In-house method SOP M 1516 2010-09	Screening method for the determination of pharmacologically active substances in foodstuffs of animal origin by LC-MS/MS - Muscle, fish and seafood version

2.3 Determination of sugars in feedstuffs by photometry

In-house method SOP M 1518 2020-10	Enzymatic determination of sugars and organic acids in solid foodstuffs and beverages, determination of sugars in feedstuffs

2.4 Sample preparation for real-time PCR analysis by extraction 2

GeneSpin Cat. No. 5224400605 V9 2018-10	Kit for the isolation of high-quality DNA from foodstuff and feedstuff samples
In-house method SOP M 3196 2019-10	Sample preparation, homogenisation and DNA extraction for animal species identification using real-time PCR

2.5 Determination of animal species in wet and dry feed containing meat and fish by real-time PCR 1

DNAnimal Screen Halal IPC (LR) Cat. No 5422221210 V3 2018-01	Test kit with 96 real-time PCR reactions for qualitative real-time PCR detection of porcine and equine/donkey DNA with IPC (Application also for wet and dry feed containing meat and fish)
DNAnimal Ident Beef IPC (LR/HR) Cat. No 5422220610 V5 2017-09	Test kit for the qualitative detection of bovine DNA, 96 real-time PCR reactions with IPC (Application also for wet and dry feed containing meat and fish)
DNAnimal Ident chicken IPC (LR) Cat. No 5422221010 V4 2017-12	Test kit for the qualitative detection of chicken DNA, 96 real-time PCR reactions with IPC (Application also for wet and dry feed containing meat and fish)

2.6 Sample preparation for NGS analysis by extraction 1

NucleoSpin Food Macherey-Nagel 740945 Rev. 12 2017-03	DNA extraction
In-house method SOP M 3586 2018-06	DNA analysis in foodstuffs by NGS - Homogenisation of samples (Application also for wet and dry feed containing meat and fish)
In-house method SOP M 3588 2018-06	DNA analysis in foodstuffs by NGS - DNA extraction (Application also for wet and dry feed containing meat and fish)
In-house method SOP M 3591 2018-06	DNA analysis in foodstuffs by NGS - DNA quantification and dilution (Application also for wet and dry feed containing meat and fish)

2.7 (Non-targeted) determination of DNA in wet and dry feed containing meat and fish by sequencing (NGS) 1

All Species ID Fish DNA Analyser, A38454, A388455 V2 2018-11	Fish DNA amplification by PCR and sequencing by next generation sequencing in foodstuff and feedstuff samples (Application only for wet and dry feed containing meat and fish)
All Species ID Meat DNA Analyser, A38452, A388453 V1 2018-11	Meat DNA amplification by PCR and sequencing by next generation sequencing in foodstuff and feedstuff samples (Application only for wet and dry feed containing meat and fish)
In-house method SOP M 3592 2018-06	DNA analysis in foodstuffs by NGS - DNA amplification (Application also for wet and dry feed containing meat and fish)
In-house method SOP M 3593 2018-06	DNA analysis in foodstuffs by NGS - Library preparation (Application also for wet and dry feed containing meat and fish)
In-house method SOP M 3594 2018-06	DNA analysis in foodstuffs by NGS - Preparation chip and DNA sequencing (Application also for wet and dry feed containing meat and fish)

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

Sampling

Method	Title
DIN EN ISO 5667-01 (A 4) 2007-04	Water quality - Sampling - Part 1: Guidance on the design of sampling programmes and sampling techniques
DIN EN ISO 19458 (K 19) 2006-12	Water quality - Sampling for microbiological analysis

ANNEX 1: MICROBIOLOGICAL PARAMETERS

PART I: General requirements for drinking water

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

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

No.	Parameter	Method
1	Escherichia coli (E. coli)	DIN EN ISO 9308-1 (K 12) 2017-09
2	Enterococci	DIN EN ISO 7899-2 (K 15) 2000-11
3	Pseudomonas aeruginosa	Not used

ANNEX 2: CHEMICAL PARAMETERS

PART I: Chemical parameters whose concentration does not usually increase in the distribution network, including the drinking water installation

Not used

PART II: Chemical parameters whose concentration may increase in the distribution network, including the drinking water installation

Not used

ANNEX 3: INDICATOR PARAMETERS

Part I: General indicator parameters

No.	Parameter	Method
1	Aluminium	Not used
2	Ammonium	Not used
3	Chloride	Not used
4	Clostridium perfringens (including spores)	Not used
5	Coliform bacteria	DIN EN ISO 9308-1 (K 12) 2017-09
6	Iron	Not used
7	Colouring (spectral absorption coefficient Hg 436 nm)	Not used
8	Odour	Not used
9	Taste	Not used
10	Colony count at 22 °C	DIN EN ISO 6222 (K 5) 1999-07 TrinkwV Section15 Paragraph (1c)
11	Colony count at 36 °C	DIN EN ISO 6222 (K 5) 1999-07 TrinkwV Section 15 Paragraph (1c)
12	Electrical conductivity	Not used
13	Manganese	Not used
14	Sodium	Not used
15	Organically bound carbon (TOC)	Not used
16	Oxidisability	Not used
17	Sulphate	Not used
18	Turbidity	Not used
19	Hydrogen ion concentration	Not used
20	Calcite dissolving capacity	Not used
21	Tritium	Not used
22	Total indicative dose	Not used

Part II: Specific requirements for drinking water in systems in the drinking water installation

Not used

Parameters not included in Annexes 1 to 3 of the German Drinking Water Ordinance
Not used

Additional periodic testing

Not used

This accreditation does not replace the recognition or approval procedure of the competent authority in accordance with the requirements of the regulator.

4 Determination of ingredients and residues in cosmetics by liquid chromatography with conventional detectors (DAD, FID, UV, VIS detectors)

In-house method SOP M 1522 2020-10	Quantitative determination of sorbic acid, benzoic acid, salicylic acid, pHB ester in foodstuffs by HPLC *(Application also to cosmetics; only pHB methyl ester, pHB ethyl ester, sorbic acid, benzoic acid*)
In-house method SOP M 1528 2018-06	Quantitative determination of caffeine/theobromine and theophylline in foodstuffs, soft drinks, cocoa/cocoa products, roasted coffee and coffee extracts by HPLC *(Application also to cosmetics; caffeine only*)

5 Selected analysis of fattening additives in animal tissues and excretions

In-house method SOP M 3461 2017-08	Qualitative screening method for determination of selected hormones in calf urine and clenbuterol in calf hair by LC-MS/MS
In-house method SOP M 3490 2019-01	Quantitative determination of betamethasone, dexamethasone and flumethasone in calf urine by LC-MS/MS

6 Determination of gases in packaging using an analyser

In-house method SOP M 1544 2011-04	Determination of the proportion of oxygen and carbon dioxide in modified atmosphere packaging using an analyser

Abbreviations used

ASU	Amtliche Sammlung von Untersuchungsverfahren (Official Collection of Test Methods) on the basis of Section 64 LFGB (German Food and Feed Act)
AVV	Allgemeine Verwaltungsvorschrift (general administrative regulation)
DFG	Deutsche Forschungsgemeinschaft, Kommission für Pflanzenschutz-, Pflanzenbehandlungs- und Vorratsschutz-mittel, Methodensammlung zur Rückstandsanalytik von Pflanzenschutzmitteln (German Research Foundation, Commission for Plant Protection, Plant Treatment and Storage Protection Agents, Collection of Methods for Residue Analysis of Plant Protection Products), Volume III, 6. Instalment 1982, Verlag Chemie, Weinheim
DGF	Deutsche Gesellschaft für Fettwissenschaft (German Society for Fat Research)
DIN	Deutsches Institut für Normung e. V. (German Institute for Standardization)
ELISA	Enzyme-linked immunosorbent assay
EN	European standard
IEC	International Electrotechnical Commission
IFU	International Fruit and Vegetable Juice Association
ISO	International Organization for Standardization
LFGB	Lebensmittel- und Futtermittelgesetzbuch (German Food and Feed Act)
MEBAK	Mitteleuropäische Brautechnische Analysenkommission (Central European Brewery Analysis Commission)
OIV	International Organisation of Vine and Wine
In-house method SOP	In-house method of SGS INSTITUT FRESENIUS GmbH/ Standard Operating Procedure
SLMB	Schweizer Lebensmittelbuch (Swiss Food Code)