DAkkS
Deutsche
Akkreditierungsstelle

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Annex to the Accreditation Certificate D-PL-14251-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **24.02.2023**

Date of issue: 21.06.2023

Holder of accreditation certificate:

EUROFINS Analytik GmbH
Neuländer Kamp 1, 21079 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, chemical, sensory, molecular biological, immunological and visual analysis of foodstuffs;
physical, physico-chemical, chemical and sensory analysis of feedstuffs;
selected physical, physico-chemical, chemical, molecular biological and immunological analysis of equipment and commodities in the food sector; sensory and visual analysis of commodity goods

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

Within the given testing field marked with */, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the following:**

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

The listed testing methods are exemplary.

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

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

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

1.1 Sample pretreatment, preparation and processing of foodstuffs and feedstuffs

1.1.1 Mechanical sample preparation for physical, physico-chemical and chemical analyses of foodstuffs and feedstuffs **

ASU L 53.00-7 2019-07	Analysis of foodstuffs – Spices and condiments – Preparation of a ground sample for analysis
ANA-MA 3.2.2-02/01 2019-11	Central sample grinding

1.1.2 Transesterification of fats for gas chromatographic analysis of foodstuffs and feedstuffs *

DGF C-VI 11a 2016	Fatty acid methyl ester (boron trifluoride method)
DGF C-VI 11d 1998	Fatty acid methyl ester (alkaline transesterification)

1.1.3 Extraction for physical, physico-chemical and chemical analysis of foodstuffs and feedstuffs **

DGF K-III 1 2011	Isolation of the fat phase from foodstuffs (Modification: *Also for feedstuffs*)
PV 1344 2017-02	Extraction of fat and its related substances with the Weibull-Stoldt and Soxhlet method

1.2 Determination of ingredients and additives in foodstuffs and feedstuffs by high-performance liquid chromatography (HPLC) with conventional detectors (RI, ELSD, UV/VIS, FLD) **

ISO 29841 2009-03	Vegetable fats and oils – Determination of the degradation products of chlorophyll a and a' (pheophytin a, a' and pyropheophytin)
DIN 10767 2015-08	Analysis of coffee and coffee products – Determination of chlorogenic acids content in roasted coffee and coffee extract (Modification: *Adjustment of chromatographic conditions*)
ASU L 45.00-1 1999-11	Analysis of foodstuffs – Determination of theobromine and caffeine in cocoa (Modification: *Adjustment of chromatographic conditions*)
ASU L 46.00-3 2013-08	Analysis of foodstuffs – Analysis of coffee and coffee products – Determination of caffeine content using HPLC reference method (Modification: *Application also to alcoholic beverages, adjustment of chromatographic conditions*
AOAC 983.15 1994	Phenolic antioxidants in oils, fats and butter (Modification: *Detection by DAD using other wavelengths, calculation using internal standard as well as recovery rate*)
PV 1207 2019-03	Determination of fructose, glucose, sucrose, lactose, maltose in foodstuffs by HPLC-RID
PV 1572 2020-10	Determination of BHA in feedstuff premixes with a fat content < 10% by HPLC-DAD

1.3 Determination of ingredients and additives in foodstuffs and feedstuffs by high-performance liquid chromatography (HPLC) with mass-selective detectors (MS/MS) **

ASU L 00.00-134 2010-09	Analysis of foodstuffs – Determination of coumarin in foodstuffs containing cinnamon by HPLC-DAD or HPLC-MS/MS (Restriction: *Here by HPLC-MS/MS*)
PV 1300 2017-03	Determination of acesulfame K, aspartame, cyclamate, saccharin and sucralose in foodstuffs using HPLC-MS/MS
PV 1364 2015-02	Determination of steviol glycosides as steviol equivalents in sugary foodstuffs by LC-MS/MS

1.4 Determination of ingredients and additives in foodstuffs and feedstuffs by gas chromatography (GC) with conventional detectors (FID) **

ASU L 13.03.06-1 2010-01	Analysis of foodstuffs – Detection of cocoa butter equivalents in cocoa butter by high-resolution capillary gas chromatography (HR-GC) (Modification: *Automated sample preparation, adjustment of chromatographic conditions*)
ASU L 13.03.06-2 2010-01	Analysis of foodstuffs – Quantification of cocoa butter equivalents in cocoa butter by high-resolution capillary gas chromatography (HR-GC) (Modification: *Automated sample preparation, adjustment of chromatographic conditions*)
ASU L 17.00-12 1999-12 Corrigendum 2003-07	Analysis of foodstuffs – Determination of butyric acid as methyl ester in fat from bread including small baked products made of bread dough (Modification: *Application to starchy foods, transesterification with methanolic KOH*)
DGF C-VI 14 2008	Gas chromatography of triacylglycerols (Modification: *Technical adaptation of devices for online derivatisation, adjustment of chromatographic conditions*)
COI/T.20/Doc.No.32 2013-11	Determination of composition of triacylglycerols and composition and content of di-acylglycerols by capillary gas chromatography, in vegetable oils
PV 1629 2021-06	Determination of fatty acids and fatty acid distribution in feedstuffs by GC-FID

1.5 Determination of ingredients and additives in foodstuffs and feedstuffs by gravimetry **

DIN EN ISO 658 2002-08	Oilseeds – Determination of content of impurities
ASU F 0009 (EG) 2010-09	Analysis of feedstuffs – Determination of crude oils and fats in feedstuffs – Annex III to Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the sampling methods and the methods of analysis for the official control of feed materials

ASU F 0014 (EG) 2010-09	Analysis of feedstuffs – Determination of crude ash in feedstuffs – Annex III to Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the sampling methods and the methods of analysis for the official control of feed materials (Modification: *Use of the prepASH device from Precisa*)
ASU L 06.00-4 2017-10	Analysis of foodstuffs – determination of ash in meat and meat products (Modification: *Application to protein-containing foodstuffs of animal origin other than dairy products*)
ASU L 06.00-6 2014-08	Analysis of foodstuffs – Determination of total fat content in meat and meat products – Weibull-Stoldt gravimetric method – Reference method (Modification: *Application to solid soy products as well as protein-containing foodstuffs of animal origin*)
UNECE DDP-27 2013	Brazil nut kernels
PV 1588 2021-03	Gravimetric determination of fat content in ready meals, sauces and soups

1.6 Determination of ingredients and additives and of indices in foodstuffs and feedstuffs by titrimetry**

DIN EN ISO 3657 2020-07	Animal and vegetable fats and oils – Determination of saponification value
DIN EN ISO 3961 2018-11	Animal and vegetable fats and oils – Determination of iodine value
ASU F 0003 (EG) 2010-09	Analysis of feedstuffs – Determination of crude protein content in feedstuffs – Annex III to Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the sampling methods and the methods of analysis for the official control of feed materials
ASU F 0018 (EG) 2010-09	Analysis of feedstuffs – Determination of chlorine content in feedstuffs – Annex III to Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the sampling methods and the methods of analysis for the official control of feed materials

ASU L 06.00-7 2014-08 Supplement 2018-06	Analysis of foodstuffs – Determination of crude protein content in meat and meat products (Modification: *Application to solid soy products as well as protein-containing foodstuffs of animal origin*)
ASU L 07.00-5/1 2010-01	Analysis of foodstuffs – Determination of salt content (sodium chloride) in meat products – Potentiometric endpoint determination (Modification: *No clarification with Carrez reagent*)
ASU L 13.00-40 2012-01	Analysis of foodstuffs – Determination of peroxide number in animal and vegetable fats and oils – Potentiometric endpoint determination
ASU L 17.00-6 Corrigendum 2009-06	Analysis of foodstuffs – Determination of chloride for the calculation of salt in bread, including small baked products made of bread dough (Modification: *Application to starchy foods, automatic endpoint titration, no clarification with Carrez reagent*)
PV 1570 2021-03	Determination of water content in spices and herbs by oven evaporation and subsequent biamperometric-coulometric Karl Fischer titration

1.7 Determination of water activity in foodstuffs and feedstuffs by hygrometry

Nordic Committee on Food Analysis No. 168 2001	Water activity – Instrumental determination with the Novasina electronic hygrometer and the Aqua Lab dew point meter
PV 1632 2021-06	Hygrometric determination of water activity in feedstuffs

1.8 Determination of pH value and conductivity in foodstuffs and feedstuffs by electrode measurement **

ASU L 26.04-3 1987-06	Analysis of foodstuffs – Measurement of the pH value in the liquid medium or the brine of sauerkraut
ASU L 31.00-2 1997-01	Analysis of foodstuffs – Determination of the pH value of fruit and vegetable juices (Modification: *Application to beverages and syrups*)

ICUMSA GS -13 1994-04	Determination of the conductivity of ash in raw sugar, brown sugar, juice, syrup and molasses – Official
PV 1631 2021-06	Potentiometric determination of pH value in feedstuffs

1.9 Determination of ingredients and additives in foodstuffs and feedstuffs by photometry *

Regulation (EEC) No 2568/91 Annex IX 2019-10	Commission Regulation (EEC) No 2568/91 of 11 July 1991 on the characteristics of olive oil and olive-residue oil and on the relevant methods of analysis – Spectrophotometric investigation in the ultraviolet
ICUMSA GS 2-10 2011	Determination of colour in white sugar solutions (Modification: *Indication of ICUMSA points*)
ICUMSA GS 2-18 2013	Determination of the turbidity of white sugar solutions
ICUMSA GS 9-8 2011	Determination of the colouration of a sugar solution at pH 7.0 using MOPS Buffer
R-Biopharm AG Citric acid 10 139 076 035 2017-07	UV method for the determination of citric acid in foodstuffs
R-Biopharm AG Lactose/D-galactose 10 176 303 035 2017-08	UV method for determination of lactose and D-galactose in foodstuffs and other sample materials

1.10 Determination of ingredients and additives in foodstuffs and feedstuffs by polarimetry *

Regulation (EC) 152/2009 Annex III, L 2020-11	Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed – Methods of analysis to control the composition of feed materials and compound feed – Determination of starch
ASU L 18.00-6 2003-12	Analysis of foodstuffs – Determination of starch content in pastries

ICUMSA GS 1-1 2011	Determination of the polarisation of raw sugar by polarimetry

1.11 Determination of ingredients in foodstuffs by refractometry *

DIN EN ISO 6320 2017-07	Animal and vegetable fats and oils – Determination of refractive index
ASU L 26.11.03-1 1983-05	Determination of dry matter in tomato purée by refraction measurement
UM Handbook H.3 1992-01	Determination of the Brix value with the refractometer

1.12 Determination of ingredients in foodstuffs by volumetry *

DIN 10229 2000-08	Analysis of spices and condiments – Determination of moisture content – Distillation process
ASU L 53.00-10 2019-12	Analysis of foodstuffs – Determination of essential oil content in spices, seasoning ingredients and herbs – Steam distillation method (Modification: *Matrix-dependent sample weight*)

1.13 Determination of the density of liquid foodstuffs and feedstuffs by natural frequency measurement

DGF C-IV 2d 2016	Density – Oscillating U-tube method
PV 1633 2021-06	Determination of density in juices, molasses, sauces and clear liquids with the oscillating U-tube method

1.14 Determination of metals in foodstuffs and feedstuffs by atomic emission spectrometry (AES) **

ASU L 07.00-56 2000-07 Corrigendum 2021-03	Analysis of foodstuffs – Determination of sodium in meat products (Modification: *Application to protein-containing foodstuffs of animal origin*)

PV 1551 2021-06	Determination of sodium content in ash from feedstuffs by atomic emission spectrometry (AES)

1.15 Determination of colourants in selected foodstuffs by thin-layer chromatography

PV 0866 2017-09	Identification of water-soluble colourants in foodstuffs containing fat, protein and sugar by high-performance thin-layer chromatography (HPTLC)

1.16 Detection of irradiated foodstuffs by electron spin resonance spectroscopy

DIN EN 1786 1997-03	Foodstuffs – Detection of irradiated food containing bone – Method by ESR spectroscopy

1.17 Detection of irradiated foodstuffs using luminescence measurements

DIN EN 1788 2002-01	Foodstuffs – Thermoluminescence detection of irradiated food from which silicate minerals can be isolated
DIN EN 13751 2009-11	Foodstuffs – Detection of irradiated food using photostimulated luminescence

1.18 Determination of ingredients and additives in foodstuffs by ^{1}H NMR **

PV 1415 2020-12	Determination of 16-OMC, kahweol and cafestol in green and roasted coffee by ^{1}H NMR
PV 1423 2016-12	Determination of the molar content of 1-O-alkyl-2,3-diacyl-sn-glycerols in shark liver oil by ^{1}H NMR
PV 1426 2017-09	Determination of taurine and caffeine in energy drinks and soft drinks by ^{1}H NMR
PV 1446 2016-12	Determination of trigonelline, N-methylpyridine and niacin in roasted coffee by ^{1}H NMR

1.19 Determination of ingredients and indices for the authenticity and quality of liquid foodstuffs and food extracts by ^{1}H NMR spectroscopy **

PV 1429 2016-12	SGF Profiling – Fruit juice analysis (juice screening) using NMR for ingredients and characteristics for authenticity and quality, as well as NMR-based quantification, without data evaluation, sample preparation and measurement according to Bruker Biospin GmbH
PV 1487 2017-05	Eurofins Profiling – Olive oil analysis (olive oil screening) using NMR for ingredients and indices for authenticity and quality, as well as ^{1}H NMR-based quantification, statistics and chemometrics
PV 1538 2019-03	Fingerprint analysis for comparison of two olive oils using ^{1}H NMR

2 Sensory analysis of foodstuffs, feedstuffs and commodities

2.1 Determination of smell, taste, external quality, consistency and texture in foodstuffs and feedstuffs using simple descriptive tests *

ASU L 00.90-6 2015-06	Analysis of foodstuffs – Sensory test methods – Simply descriptive test
ASU L 00.90-14 2019-03	Analysis of foodstuffs – Sensory test methods – Descriptive test followed by quality assessment

2.2 Determination of smell, taste, external quality, appearance, consistency and texture in foodstuffs and commodities using special sensory tests *

Regulation (EEC) No 2568/91 Annex XII 2019-09	Commission Regulation (EEC) No 2568/91 of 11 July 1991 on the characteristics of olive oil and olive-residue oil and on the relevant methods of analysis – International Olive Council's method for the organoleptic assessment of virgin olive oil
DIN EN 1230-1 2010-02	Paper and board intended to come into contact with foodstuffs – Sensory analysis – Part 1: Odour (Modification: *Odour assessment using a simulant foodstuff analogous to DIN EN 1230-2: 2018-10*)
DIN EN 1230-2 2018-10	Paper and board intended to come into contact with foodstuffs – Sensory analysis – Part 2: Taste
DIN 10955 2004-06	Sensory analysis – Testing of packaging materials and packages for foodstuffs

ASU L 00.90-7 2007-12 Corrigendum 2020-05	Analysis of foodstuffs – Sensory test methods – Triangle test
DGF-C-II 1 2020	External quality – Sensory tests (Modification: *Application also to seasoning oils, for which no categorisation pursuant to DGF*)

3 Molecular biological analysis of foodstuffs and feedstuffs

3.1 Extraction of DNA for molecular biological analysis of foodstuffs *

ASU L 00.00-119 2014-02	Analysis of foodstuffs – Method for detection of genetically modified organisms and their products in foodstuffs – Nucleic acid extraction
Eurofins GeneScan DNA Cleaning Columns ID0538 2017-11	Purification of DNA using DNA cleanup columns
Maxwell RSC Pure Food GMO Authentication Kit AS1600 2020-02	Cleanup from foodstuff and feedstuff samples

3.2 Separation for molecular biological analysis of foodstuffs

PV 0907 2018-06	Separation of DNA fragments by gel electrophoresis

3.3 Qualitative detection of allergens and animal species in foodstuffs by real-time PCR **

ASU L 00.00-169 2019-07	Analysis of foodstuffs – Detection and determination of peanut in foodstuffs by real-time PCR
ASU L 08.00-56 2020-02	Analysis of foodstuffs – Detection of a specific DNA sequence from celery (Apium graveolens) in cooked sausages by real-time PCR (Modification: *Application to extracted genomic DNA from foodstuffs*)

ASU L 08.00-65 2017-10	Analysis of foodstuffs – Simultaneous detection and determination of black mustard (Brassica nigra L.) or brown mustard (Brassica juncea L.), white mustard (Sinapis alba), celery (Apium graveolens) and soy (Glycine max) in cooked sausages by real-time PCR (Modification: *Only qualitative detection of black or brown and white mustard*; *application to extracted genomic DNA from foodstuffs*)
ASU L 18.00-19 2014-08	Analysis of foodstuffs – Detection and determination of sesame (Sesamum indicum) in rice and wheat biscuits and in gravy powder by real-time PCR (Modification: *Only qualitative detection*: *Application to extracted genomic DNA from foodstuffs*)
ASU L 18.00-20 2014-08	Analysis of foodstuffs – Detection and determination of almond (Prunus dulcis) in rice and wheat biscuits and in gravy powder by real-time PCR (Modification: *Only qualitative detection*; *Application to extracted genomic DNA from foodstuffs*)
PV 1258 2020-10	Detection of pea DNA by qualitative real-time PCR
PV 1263 2020-10	Detection of fish DNA by qualitative real-time PCR
PV 1569 2020-09	Simultaneous detection of walnut and pecan DNA by qualitative real-time PCR

4 Determination of allergens in foodstuffs by enzyme immunoassay (ELISA) *

Morinaga Institute of Biological Science, Inc. ELISA Kit II Casein M2113 2017-06	Quantitative determination of casein in foodstuffs
Morinaga Institute of Biological Science, Inc. ELISA Kit II Hazelnut M2119 2019-09	Quantitative determination of hazelnut protein in foodstuffs

Morinaga Institute of Biological Science, Inc. ELISA Kit II High Sensitive Peanut M2120 2019-01	Quantitative determination of peanut protein in foodstuffs
R-Biopharm AG RIDASCREEN ® Gliadin R7001 2015-10	Enzyme immunoassay for quantitative determination of gliadins and related prolamins
Eurofins Technologies SENSISpec ELISA Almond HU003001/HU0030025 2019-02	Enzyme immunoassay for quantitative determination of almond in foodstuffs
Eurofns Ingenasa SENSISpec INgezim Gluten R5 30.GLU.K2 2018-04	Immunoenzymatic sandwich test with two antibodies for the quantitative analysis of gluten in food samples

5 Visual inspections of foodstuffs and food packaging

DGF C-IV 9 2002	Smoke point
ICUMSA GS2-11 2007	Determination of the visual grade of white sugars using Braunschweig colour types (Modification: *Assessment by two people*)
PV 1084 2008-01	Detection of chlorinated substances in food packaging (Beilstein sample)

6 Analysis of equipment and commodities in the food sector

6.1 Photometric determination

R-Biopharm AG Lactose/D-galactose 10 176 303 035 2017-08	Determination of lactose and D-galactose in foodstuffs and other sample materials (Restriction: *Only determination of lactose, here for equipment and commodities in the food sector*)

6.2 Extraction of DNA for molecular biological analysis of equipment and commodities in the food sector

PV 1627 2021-05	Extraction of DNA from swabs and cleaning water

6.3 Qualitative detection of allergens from equipment and commodities in the food sector by real-time PCR **

ASU L 08.00-65 2017-10	Analysis of foodstuffs – Simultaneous detection and determination of black mustard (Brassica nigra L.) or brown mustard (Brassica juncea L.), white mustard (Sinapis alba), celery (Apium graveolens) and soy (Glycine max) in cooked sausages by real-time PCR (Restriction: *Only qualitative detection of black or brown and white mustard*) (Modification: *Application to extracted genomic DNA from equipment and commodities in the food sector*)
ASU L 18.00-19 2014-08	Analysis of foodstuffs – Detection and determination of sesame (Sesamum indicum) in rice and wheat biscuits and in gravy powder by real-time PCR (Restriction: *Only qualitative detection*) (Modification: *Application to extracted genomic DNA from equipment and commodities in the food sector*)
ASU L 18.00-20 2014-08	Analysis of foodstuffs – Detection and determination of almond (Prunus dulcis) in rice and wheat biscuits and in gravy powder by real-time PCR (Restriction: *Only qualitative detection*) (Modification: *Application to extracted genomic DNA from equipment and commodities in the food sector*)

6.4 Extraction for immunological analysis of equipment and commodities in the food sector

Eurofins Technologies Gluten extraction in surface swab samples IT-G-157 2012-06	Extraction of gluten in surface samples (swabs) with the SENSISPEC Ingezim Gluten R5 kit
PV 1328 2021-05	Extraction of proteins from cleaning water

6.5 Determination of allergens from equipment and commodities in the food sector by enzyme immunoassay (ELISA) *

Morinaga Institute of Biological Science, Inc. ELISA Kit II Casein M2113 2017-06	Quantitative determination of casein in foodstuffs (Modification: *Here for equipment and commodities in the food sector*)
R-Biopharm AG Ridascreen ® FAST Allergen R7001 2017-06	Swab method for qualitative analysis of allergens in the production line or for laboratory equipment (Restriction: *Here only for equipment and commodities in the food sector, only for determination of lysozyme*)
R-Biopharm AG Ridascreen ® FAST Lysozym R6452 2017-06	Enzyme immunoassay for quantitative determination of lysozyme (Modification: *Here for equipment and commodities in the food sector*)
R-Biopharm AG Ridascreen ® FAST Gliadin R7001 2015-10	Enzyme immunoassay for quantitative determination of gliadins and related prolamins (Modification: *Here for equipment and commodities in the food sector*)
Eurofins Technologies SENSISpec ELISA Mandel HU0030001/HU0030025 2021-11	Enzyme immunoassay for quantitative determination of almond (Modification: *here for fitment and utensils in food areas*)

Abbreviations used:

AOAC	Association of Analytical Communities
ASU	Amtliche Sammlung von Untersuchungsverfahren (Official Collection of Test Methods) on the basis of § 64 LFGB (German Food and Feed Act)
COI	Methods of the International Olive Council
DGF	Deutsche Gesellschaft für Fettwissenschaft e.V. (German Society for Fat Research)
DIN	Deutsches Institut für Normung (German Institute for Standardization)
EN	European Standard
ICUMSA	International Commission for Uniform Methods of Sugar Analysis
IEC	International Electrotechnical Commission
ISO	International Organisation for Standardisation
LFGB	Lebensmittel- und Futtermittelgesetzbuch (German Food and Feed Act)
PV xxxxx	In-house method of Eurofins Analytik GmbH
UM	United Molasses
UNECE	United Nations Economic Commission for Europe
VDLUFA	Verband Deutscher Landwirtschaftlicher Untersuchungs- und Forschungsanstalten (Association of German Agricultural Testing and Research Institutions)
ANA-MA	Work instruction from the quality management system, in-house method of Eurofins Analytik GmbH