Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-22162-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **01.08.2024**

Date of issue: 01.08.2024

Holder of accreditation certificate:

Hopfenveredlung St. Johann GmbH
Freiligrathstraße 7/9
90482 Nürnberg

with the location

Hopfenveredlung St. Johann GmbH
Zweigniederlassung Wolnzach
Abteilung Labor NATECO2
Auenstraße 18-20
85283 Wolnzach

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

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

Tests in the fields:

Physico-chemical and chemical analysis of foodstuffs and feedstuffs

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 Analysis of foodstuffs

1.1 Sample preparation

DGF C-VI 11 a (16) 2016	German standard methods for the analysis of fats and fat products – Special methods – Fatty acid methyl ester transmethylation with boron trifluoride (BF3) (Modification: *Dissolving process sample in toluene*)

1.2 Determination of ingredients in foods using liquid chromatography with conventional detector (DAD)**

ASU L 47.00-6 2014-02	Analysis of foodstuffs – Analysis of tea and solid tea extract – Determination of caffeine content – HPLC method
ASU L 47.08-1/1 2002-05	Analysis of foodstuffs – Determination of theobromine and caffeine content of liquid tea beverages – Part 1: HPLC routine procedure
W-1001 2022-05	Determination of cannabinoids in hemp and hemp products by gradient HPLC-DAD
W-1002 2022-09	Determination of astaxanthin after enzymatic hydrolysis by HPLC in foodstuffs and feedstuffs (Restriction: *Here only in foodstuffs*)

1.3 Determination of ingredients in foods using gas chromatography with conventional detector (FID)**

DGF C-VI 10 a (00) 2016	German standard methods for the analysis of fats and fat products – Special methods – Gas chromatography: Analysis of fatty acids and fatty acid distribution
W-1008 2022-07	Determination of hemp flavours (including terpenes) in hemp and hemp products using GC-FID

1.4 Gravimetric determinations of ingredients in foods **

ASU L 06.00-6 2014-08	Analysis of foodstuffs – Determination of total fat content in meat and meat products – Weibull-Stoldt gravimetric method (Modification: *Matrix foodstuffs*)
ASU L 13.05-3 2002-05	Analysis of foodstuffs – Determination of fat content in margarine and other fat spreads (Modification: *Matrix foodstuffs, indicated as equivalent to $scCO_2$ extraction*)
ASU L 13.00-19 2004-12	Analysis of foodstuffs – Determination of unsaponifiable matter in vegetable and animal fats and oils – Method using hexane extraction
ASU L 13.00-20 2004-12	Analysis of foodstuffs – Determination of unsaponifiable matter in vegetable and animal fats and oils – Method using diethyl ether extraction
ASU L 13.00-47 2019-07	Analysis of foodstuffs – Animal and vegetable fats and oils – Determination of the conventional mass per volume (litre weight in air)
ASU L 15.00-6 2011-06	Analysis of foodstuffs – Determination of moisture content in cereals and cereal products
W-4004 2022-08	Determination of moisture content in plant material using microwave drying

1.5 Titrimetric determination of parameters, ingredients and additives*

DIN EN ISO 8534 2017-05	Animal and vegetable fats and oils – Determination of water content – Karl Fischer method (pyridine-free)
ASU L 13.00-5 2012-01	Analysis of foodstuffs – Determination of acid number and acidity of animal and vegetable fats and oils
ASU L 13.00-10 2019-07	Analysis of foodstuffs – Animal and vegetable fats and oils – Determination of the iodine value
ASU L 13.00-18 2021-03	Analysis of foodstuffs – Determination of saponification number in animal and vegetable fats and oils

ASU L 13.00-40 2012-01	Analysis of foodstuffs – Animal and vegetable fats and oils – Determination of the peroxide value – Potentiometric endpoint determination (Modification: *Solvent mixture $CHCl_3$:AcOH 2:3*)

1.6 Further physico-chemical analyses of foods

ASU L 13.00-15 2018-06	Analysis of foodstuffs – Animal and vegetable fats and oils – Determination of the anisidine value
ASU L 13.00-28 2018-10	Analysis of foodstuffs – Determination of the refractive index of animal and vegetable fats and oils

1.7 Determination of ingredients, residues and contaminants using liquid chromatography with mass-selective detector (MS/MS)**

ASU L 00.00-34 2010-09	Analysis of foodstuffs – Modular multi-method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19)
W-2002 2021-12	Determination of plant protection product residues (LC-MS/MS) in lipophilic matrices and plant materials with increased fat content (Matrix: *Lipophilic extracts (e.g. from ethanol extraction, scCO2 extraction and plant materials with a fat content > 50%*)
W-2005 2022-09	Determination of cannabinoid residues in foodstuffs and feedstuffs by LC-MS/MS
W-1021 2024-03	Determination of selected polyphenols in plant materials by LC-MS/MS (Restriction: *here for foodstuffs*)

1.8 Determination of residues and contaminants using gas chromatography with mass-selective detector (MS, MS/MS)**

ASU L 00.00-34 2010-09	Analysis of foodstuffs – Modular multi-method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19)
W-2004 2022-09	Determination of polycyclic aromatic hydrocarbons (PAHs) in fatty foodstuffs and feedstuffs by GC-MS

2. Analysis of feedstuffs

2.1 Sample preparation

DGF C-VI 11 a (16) 2016	German standard methods for the analysis of fats and fat products – Special methods – Fatty acid methyl ester transmethylation with boron trifluoride (BF3) (Modification: *Dissolving process sample in toluene*)

2.2 Determination of ingredients in foods using liquid chromatography with conventional detector (DAD)**

W-1001 2022-05	Determination of cannabinoids in hemp and hemp products by gradient HPLC-DAD
W-1002 2022-09	Determination of astaxanthin after enzymatic hydrolysis by HPLC in foodstuffs and feedstuffs (Restriction: *Here only in feedstuffs*)

2.3 Determination of ingredients in foods using gas chromatography with conventional detector (FID)**

DGF C-VI 10a (00) 2016	Deutsche Einheitsmethoden zur Untersuchung von Fetten, Fettprodukten - Spezielle Verfahren - Gaschromatographie: Analyse der Fettsäuren und der Fettsäureverteilung
W-1008 2022-07	Determination of hemp flavours (including terpenes) in hemp and hemp products using GC-FID

2.4 Titrimetric determination of parameters, ingredients and additives

DIN EN ISO 8534 2017-02	Animal and vegetable fats and oils – Determination of water content – Karl Fischer method (pyridine-free)

2.5 Determination of ingredients, residues and contaminants using liquid with mass-selective detector (MS/MS)**

ASU L 00.00-34 2010-09	Analysis of foodstuffs – Modular multi-method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19) (Modification: *Extension to feedstuffs*)
W-2002 2021-12	Determination of plant protection product residues (LC-MS/MS) in lipophilic matrices and plant materials with increased fat content (Matrix: *Lipophilic extracts (e.g. from ethanol extraction, scCO2 extraction and plant materials with a fat content > 50%*)
W-2005 2022-09	Determination of cannabinoid residues in foodstuffs and feedstuffs by LC-MS/MS
W-1021 2024-03	Determination of selected polyphenols in plant materials by LC-MS/MS (Restriction: *here for feedstuffs*)

2.6 Determination of residues and contaminants using gas chromatography with mass-selective detector (MS, MS/MS)**

ASU L 00.00-34 2010-09	Analysis of foodstuffs – Modular multi-method for the determination of plant protection product residues in foodstuffs (revised and extended version of DFG Method S 19) (Modification: *Extension to feedstuffs*)
W-2004 2022-09	Determination of polycyclic aromatic hydrocarbons (PAHs) in fatty foodstuffs and feedstuffs by GC-MS

Abbreviations used:

DIN	Deutsches Institut für Normung e.V. (German Institute for Standardisation)
IEC	International Electrotechnical Commission
EN	European standard
ISO	International Organization for Standardization
ASU	Official Collection of Methods of Analysis on the basis of § 64 Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuches (German Food and Feed Code, LFGB)
DGF	Deutsche Gesellschaft für Fettwissenschaft (German Society for Fat Research)
W-XXXX	In-house method of the laboratory NATECO2 – Hopfenveredlung St. Johann GmbH