

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-14481-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 02.07.2020

Date of issue: 02.07.2020

Holder of certificate:

**KWALIS Qualitätsforschung Fulda GmbH
Fuldaer Straße 21, 36160 Dipperz**

Tests in the fields:

physical, physico-chemical, chemical and sensory analysis of foodstuffs, straight feedingstuffs and other biological materials from agriculture and horticulture

Within the given testing field marked with *, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent testing methods.

The listed testing methods are exemplary.

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

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

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

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1 Physical, physico-chemical and chemical analysis of foodstuffs

1.1 Gravimetric determination of ingredients and additives **

<p>ASU L 00.00-18 1997-01 Corrigendum 2017-10</p>	<p>Analysis of foodstuffs – Determination of fibre in food</p>
<p>ASU L 03.00-9 2007-04</p>	<p>Analysis of foodstuffs – Determination of total dry matter of cheese and processed cheese – Reference method</p>
<p>ASU L 06.00-3 2014-08</p>	<p>Analysis of foodstuffs – Determination of water content in meat and meat products – Gravimetric method – Reference method (Deviation: <i>Also applies to fish and fish products</i>)</p>
<p>ASU L 06.00-4 2017-10</p>	<p>Analysis of foodstuffs – Determination of ash in meat, meat products and sausages – Gravimetric method (reference method) (Deviation: <i>Also applies to fish and fish products</i>)</p>
<p>ASU L 06.00-6 2014-08 Corrigendum 2014-08</p>	<p>Analysis of foodstuffs – Determination of total fat content in meat and meat products – Weibull-Stoldt gravimetric method – Reference method (Deviation: <i>Also applies to fish and fish products</i>)</p>
<p>ASU L 15.00-6 2011-06</p>	<p>Analysis of foodstuffs – Determination of moisture content in cereals and cereal products</p>
<p>ASU L 16.01-2 2008-12</p>	<p>Analysis of foodstuffs – Determination of ash in cereal flour</p>
<p>ASU L 17.00-1 1982-05 Corrigendum 2002-12</p>	<p>Analysis of foodstuffs – Determination of loss on drying in bread including small baked products made of bread dough</p>
<p>ASU L 17.00-3 1982-05 Corrigendum 2002-12</p>	<p>Analysis of foodstuffs – Determination of ash in bread including small baked goods made from bread dough (Deviation: <i>Also applies to pastries, pre-drying not applicable</i>)</p>

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ASU L 17.00-4 2017-10	Analysis of foodstuffs – Determination of the total fat content in bread including small baked products made from bread dough after acid digestion by extraction and gravimetry (Deviation: <i>Also applies to pastries, pre-drying not applicable</i>)
ASU L 20.01/02-3 1980-05	Analysis of foodstuffs – Determination of dry matter in mayonnaise and emulsified sauces
ASU L 20.01/02-5 1980-05	Analysis of foodstuffs – Determination of total fat content in mayonnaise and emulsified sauces
ASU L 22.02/04-4 2010-09	Analysis of foodstuffs – Determination of dry matter content in dried pasta
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 (Deviation: <i>Also applies to cocoa, cocoa products and sweets</i>)
ASU L 44.00-4 1985-12	Analysis of foodstuffs – Determination of total fat content in chocolate (Deviation: <i>Also applies to cocoa, cocoa products and sweets</i>)
ASU L 52.06-1 1988-05	Analysis of foodstuffs – Determination of dry matter in mustard
ASU L 52.06-2 1988-05	Analysis of foodstuffs – Determination of total fat content in mustard
ASU L 53.00-4 1996-02	Analysis of foodstuffs – Analysis of spices and seasoning ingredients – Determination of total ash and acid-insoluble ash
DGF Standard Method B-I 4 (13) 2013	Fatty raw materials – Oil seeds and fruits – Moisture and volatile matter content
DGF Standard Method B-I 5 (12) 2012	Fatty raw materials – Oil seeds and fruits – Oil seeds – Determination of oil content in oil seeds – Reference method for sunflower seeds and other oil seeds
DGF Standard Methods B-I 3 (89) 1989	Fatty raw materials – Oil seeds and fruits – Determination of the stocking rate of seeds (impurities)

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ICC Standard No. 102/1 1972	Determination of the stocking rate of wheat
ICC Standard No. 103/1 1972	Determination of the stocking rate of rye
SLB 357.1 1994-03 Amended 2009	Determination of stocking rate in cereals
PAW 002 2019-11	Gravimetric determination of fat content in foodstuffs
PAW 003 2019-11	Determination of water content or dry matter in foodstuffs (gravimetric)
PAW 005 2019-11	Gravimetric determination of ash in foodstuffs

1.2 Titrimetric determination of parameters, ingredients and additives **

ASU L 00.00-46-1 1999-11	Analysis of foodstuffs – Determination of sulphite in foodstuffs Part 1: Optimised Monier-Williams method
ASU L 01.00-10/1 2016-03	Analysis of foodstuffs – Determination of nitrogen content in milk – Part 1: Kjeldahl principle and crude protein calculation
ASU L 05.02/1 1995-01	Analysis of foodstuffs – Determination of salt content in salted egg products (Mohr titration) (Deviation: <i>Also applies to other foodstuffs</i>)
ASU L 06.00-7 2014-08 Supplement 2018-06	Analysis of foodstuffs – Determination of crude protein content in meat and meat products – Kjeldahl titrimetric method – Reference method (Deviation: <i>Also applies to fish and fish products</i>)

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ASU L 07.00-5/2 2010-01	Analysis of foodstuffs – Determination of salt content (sodium chloride) in meat products – Volhard endpoint determination (Deviation: <i>Also applies to fish and fish products</i>)
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
ASU L 13.00-10 2014-08	Analysis of foodstuffs – Determination of iodine number in animal and vegetable fats and oils
ASU L 13.00-18 2014-08	Analysis of foodstuffs – Determination of saponification number in animal and vegetable fats and oils
ASU L 13.00-37 2018-06	Analysis of foodstuffs – Animal and vegetable fats and oils – Determination of peroxide number, iodometric (visual) endpoint determination
ASU L 13.00-5 2012-01	Analysis of foodstuffs – Determination of acid number and acidity of animal and vegetable fats and oils (Deviation: <i>Also applies to fatty foodstuffs</i>)
ASU L 15.00-3 2007-12	Analysis of foodstuffs – Determination of nitrogen content and calculation of crude protein content of cereals and pulses – Kjeldahl method
ASU L 17.00-15 2013-08	Analysis of foodstuffs – Determination of crude protein content in bread including small baked products made from bread dough – Kjeldahl method (Deviation: <i>Also applies to pastries, pre-drying not applicable</i>)
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 (Deviation: <i>also applies to other acidic foodstuffs</i>)
ASU L 31.00-3 1997-09	Analysis of foodstuffs – Determination of titratable acid (total acidity) in fruit and vegetable juices
PAW 001 2019-11	Determination of nitrogen content and calculation of the crude protein content of foodstuffs – Kjeldahl titrimetric method

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1.3 Volumetric determinations of ingredients in spices, seasoning ingredients and herbs *

ASU L 53.00-10 2019-12	Analysis of foodstuffs– Determination of essential oil content in spices, seasoning ingredients and herbs, steam distillation
ASU L 53.00-8 2004-07	Analysis of foodstuffs – Analysis of spices and seasoning ingredients – Determination of water content (distillation method)

1.4 Determination of pH by electrode measurement *

ASU L 06.00-2 1980-09	Analysis of foodstuffs – measurement of pH in meat and meat products (Deviation: <i>Also applies to fish and fish products</i>)
ASU L 20.01/02-1 1980-05	Analysis of foodstuffs – Measurement of pH in mayonnaise and emulsified sauces (Deviation: <i>Also applies to mustard</i>)
ASU L 26.04-3 1987-06	Analysis of foodstuffs – Measurement of pH in the cover brine and press liquor for sauerkraut, potentiometric determination (Deviation: <i>Also applies to other acidic foodstuffs</i>)
ASU L 26.11.03-3 1983-05	Analysis of foodstuffs – Determination of the pH value of tomato purée
ASU L 31.00-2 1997-01	Analysis of foodstuffs – Determination of the pH value of fruit and vegetable juices

1.5 Frequentometric determination of ingredients *

ASU L-36.00-3a 1989-12	Analysis of foodstuffs – Determination of the relative density d _{20/20} of wort and beer – Oscillating U-tube method (Deviation: <i>Also applies to other foodstuffs</i>)
OIV-MA-BS-01 2009	Reference analysis method for determination of the alcoholic strength by volume of spirits of viticultural origin by oscillating U-tube (Deviation: <i>Also applies to other spirits</i>)

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1.6 Refractometric determination of ingredients *

ASU L 30.00-2 (EG) 1993-08	Analysis of foodstuffs – Refractometer method for determination of the soluble solids content of processed fruit and vegetable products
ASU L 40.00-2/1 2019-07	Analysis of foodstuffs – Analysis of honey – Determination of water content – Refractometric method

1.7 Photometric determinations of ingredients and additives *

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)
ASU L 06.00-9 2008-06 Corrigendum 2009-06	Analysis of foodstuffs – Determination of total phosphorus content in meat and meat products – Photometric method
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 (Deviation: <i>Also applies to other foodstuffs</i>)
ASU L 13.00-15 2018-06	Analysis of foodstuffs – Animal and vegetable fats and oils: Determination of anisidine value
ASU L 13.00-25 2012-01	Analysis of foodstuffs – Determination of ultraviolet absorption, expressed as specific UV-extinction, of animal and vegetable fats and oils (adoption of standard of the same name DIN EN ISO 3656, August 2017)
ASU L 31.00-6 1997-01 Corrigendum 2002-12	Analysis of foodstuffs – Determination of phosphorus content in fruit and vegetable juices – Spectrophotometric method
ASU L 40.00-10/1 2012-01	Analysis of foodstuffs – Analysis of honey – Determination of hydroxymethylfurfural – Part 1: Winkler photometric method (in accordance with DIN 10751 Part 1) (Deviation: <i>Also applies to other high-sugar, heated foodstuffs</i>)

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r-biopharm Citric acid 10139076035 2017-07	UV test of citric acid in foodstuffs and other sample materials, enzymatic determination
r-biopharm Ethanol 10176290035 2017-08	UV test for determination of ethanol in foodstuffs and other sample materials, enzymatic determination
r-biopharm Lactose and D-galactose 10176303035 2017-08	UV test for determination of lactose and D-galactose in foodstuffs and other sample materials, enzymatic determination
r-biopharm L-ascorbic acid 10409677035 2017-09	Colour test for determination of L-ascorbic acid in foodstuffs and other sample materials, enzymatic determination
r-biopharm D-Sorbitol 10670057035 2017-10	Colour test for determination of D-sorbitol in foodstuffs and other sample materials, enzymatic determination
r-biopharm Sucrose, D-glucose, D-fructose 10716260035 2017-11	UV test for determination of sucrose, D-glucose and D-fructose in foodstuffs and other sample materials, enzymatic determination
r-biopharm Sulphurous acid 10725854035 2017-07	UV test for determination of sulphurous acid ("total SO ₂ ") in foodstuffs and other sample materials
r-biopharm Nitrate 10905658035 2017-10	UV test for determination of nitrate (NO ₃ -) in foodstuffs and other sample materials, enzymatic determination
r-biopharm D-/L-lactic acid 11112821035 2017-09	UV test for determination of D-lactic acid and L-lactic acid in foodstuffs and other sample materials, enzymatic determination

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r-biopharm Maltose, sucrose, D-glucose 11113950035 2017-11	UV test for detection of maltose, sucrose and D-glucose in foodstuffs and other sample materials, enzymatic determination
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1.8 Detection and determination of ingredients and additives using high performance liquid chromatography (HPLC) with conventional detector (DAD) **

ASU L 00.00-9 1984-11	Analysis of foodstuffs – Determination of preservatives in low-fat foodstuffs, HPLC method
ASU L 18.00-16 1999-11	Analysis of foodstuffs – Determination of theobromine and caffeine in pastries (Deviation: <i>Also applies to other foodstuffs</i>)
ASU L 26.00-1 2018-10	Analysis of foodstuffs – Determination of nitrate content in vegetable products – HPLC/IC method (Deviation: <i>Detection with HPLC-DAD</i>)
ASU L 46.00-3 2013-08	Analysis of foodstuffs – Analysis of coffee and coffee products – Determination of caffeine content using HPLC – Reference method
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 47.05-1 1997-09	Analysis of foodstuffs – Determination of the theobromine and caffeine content of solid tea extract and preparations obtained from foodstuffs containing tea extract – HPLC method (Deviation: <i>Also applies to guarana and foodstuffs containing guarana</i>)
PAW 066 2020-01	Determination of flavouring agents in foodstuffs by HPLC-UV

1.9 Detection and determination of residues, mycotoxins, contaminants and ingredients by liquid chromatography (LC) with mass-selective detectors (triple quad, ion trap) **

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)
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ASU L 00.00-76 2008-12	Analysis of foodstuffs – Determination of chlormequat and mepiquat in low-fat foodstuffs – LC-MS/MS method (Deviation: <i>Also applies to fatty foodstuffs</i>)
ASU L 00.00-115 2018-10	Analysis of foodstuffs – Multiple analytical method for 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
ASU L 00.00-159 2016-03	Analysis of foodstuffs – Determination of acrylamide in foodstuffs by liquid chromatography and tandem mass spectrometry (LC-ESI-MS/MS)
ASU L 00.00-164 2018-06	Analysis of foodstuffs – Determination of plant protection product residues in foodstuffs of animal origin by LC-MS/MS after acetonitrile extraction/partitioning and clean-up using dispersive SPE
ASU L 01.00-76 2009-06	Analysis of foodstuffs – Determination of aflatoxin M1 content in milk and milk powder – Clean-up by immunoaffinity chromatography and determination by high performance liquid chromatography (Deviation: <i>Also applies to other foodstuffs and detection by LC-MS/MS</i>)
ASU L 15.00-9 2014-02	Analysis of foodstuffs – Determination of deoxynivalenol in cereals and cereal products and cereal-based foods for infants and young children, HPLC method with clean-up on an immunoaffinity column and UV detection (Deviation: <i>also applies to other foodstuffs, detection with LC-MS/MS</i>)
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 (Deviation <i>Also applies to other foodstuffs, detection with LC-MS/MS</i>)
ASU L 15.05-3 2006-09	Analysis of foodstuffs – Determination of fumonisin B1 and B2 in maize products – HPLC method with immunoaffinity column clean-up (adoption of standard of the same name DIN EN 14352, October 2004 edition) (Deviation: <i>Also applies to other foodstuffs, detection with LC-MS/MS</i>)

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ASU L 23.05-2 2012-01	Analysis of foodstuffs – 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 column clean-up and post-column derivatisation (Deviation: <i>No post-column derivatisation, detection with LC-MS/MS, also applies to other foodstuffs</i>)
ASU L 31.00-20 2004-12	Analysis of foodstuffs – Determination of patulin in clear and cloudy apple juice and apple purée – HPLC method with clean-up by liquid/liquid partitioning (Deviation: <i>Also applies to other foodstuffs, detection by LC-MS/MS</i>)
ASU L 36.00-13 2010-01	Analysis of foodstuffs – Determination of ochratoxin A in beer – HPLC method with clean-up on an immunoaffinity column (Deviation: <i>Also applies to other foodstuffs, detection with LC-MS/MS</i>)
ASU L 48.00-1 2002-05	Analysis of foodstuffs – Detection and determination of aflatoxins B1, B2, G1 and G2 in foods for infants and young children. (Deviation: <i>Determination by LC-MS/MS</i>)
ASU L 48.02-1 2011-01	Analysis of foodstuffs – Determination of ochratoxin A in cereal-based foods for infants and young children – HPLC method with clean-up on an immunoaffinity column (Deviation: <i>Also applies to raw materials, detection LC-MS/MS</i>)
ASU L 48.02-3 2011-01	Analysis of foodstuffs – Determination of zearalenone in cereal-based foods for infants and young children – HPLC method with clean-up on an immunoaffinity column (Deviation: <i>Also applies to other foodstuffs, detection with LC-MS/MS</i>)
EURL-FV 2013-M8	Pesticide analysis in teas and chamomile by liquid chromatography and gas chromatography tandem mass spectrometry
EURL-SRM QuPpe-AO 2019-05	Determination of chlorate and perchlorate in animal foodstuffs using the EURL-SRM method "Quick Method for the Analysis of Numerous Highly Polar Pesticides in Food Involving Extraction with Acidified Methanol and LC-MS/MS Measurement. II. Food of animal Origin (QuPpe-AO-Method)

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EURL – SRM QuPPE-PO 2019-05	Quick Method for the Analysis of Numerous Highly Polar Pesticides in Food Involving Extraction with Acidified Methanol and LC-MS/MS Measurement I. Food of Plant Origin (QuPPE-PO method) for chlorate, perchlorate, fosetyl aluminium, trimethylsulphonium cation, phosphonic acid, paraquat, diquat, maleic hydrazide and inorganic bromide (Deviation: Also applies to wine and beer)
PAW 029 2016-06	Determination of tenuazonic acid in foodstuffs by LC-MS/MS
PAW 053 2015-05	Determination of histamine in foodstuffs by LC-MS/MS
PAW 054 2017-01	Determination of T-2 and HT-2 toxin in cereals and cereal products by LC-MS/MS
PAW 067 Annex 4 2017-05	Determination of nicotine in dried products
PAW 069 2018-08	Determination of propylene thiourea (PTU) in foodstuffs by LC-MS/MS
PAW 070 2019-01	Determination of ethephon in foodstuffs by LC-MS/MS
PAW 073 2015-03	Determination of acidic herbicides in foodstuffs by LC-MS/MS
PAW 078 2015-07	Determination of glyphosate, AMPA (aminomethylphosphonic acid) and glufosinate in foodstuffs by LC-MS/MS
PAW 081 2015-05	Determination of quaternary ammonium compounds in foodstuffs by LC-MS/MS
PAW 086 2015-04	Determination of bisphenol A and F in foodstuffs by LC-MS/MS or alternatively GC-MS
PAW 087 2018-10	Determination of tropane alkaloids atropine and scopolamine in foodstuffs by LC-MS/MS
PAW 088 2015-04	Determination of melamine in foodstuffs and infant food by LC-MS/MS

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PAW 090 2016-01	Determination of ergot alkaloids in foodstuffs containing cereals by LC-MS/MS
PAW 091 2019-05	Determination of delta-9-tetrahydrocannabinol (THC) and delta-9-tetrahydrocannabinol-carboxylic acid (THCA) in foodstuffs by LC-MS/MS
PAW 092 2018-03	Determination of non-pesticides in plant-based foodstuffs by QuEChERS; Appendix 1: Determination of furanocoumarin in foodstuffs by LC-MS/MS
PAW 093 2018-11	Determination of ethyl carbamate in wine and spirits by GC-MS/MS or LC-MS/MS
PAW 774 2015-02	Determination of natamycin (pimaricin) in wine by LC-MS / MS

1.10 Sample preparation

ASU L 13.00-27/2 2019-07	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, August 2017)
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1.11 Detection and determination of residues, ingredients and additives by gas chromatography (GC) with conventional detectors (FID, FPD)*

ASU L 00.00-49/2 1999-11 Corrigendum 2002-12	Analysis of foodstuffs – Non-fatty foods – Determination of dithiocarbamate and thiuram disulfide residues – Part 2: Gas chromatographic method (Deviation: <i>Analysis by flame photometric detector (FPD)</i>)
ASU L 13.00-46 2018-06	Analysis of foodstuffs – Animal and vegetable fats and oils – Gas chromatography of fatty acid methyl esters – Part 4: Determination by capillary gas chromatography (adoption of standard of the same name DIN EN ISO 12966-4, November 2015)

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1.12 Detection and determination of residues, contaminants and ingredients and additives by gas chromatography (GC) with mass-selective detectors (MS, MS/MS)**

ASU L 00.00-24 1993-08 Corrigendum 2002-12	Analysis of foodstuffs – Determination of benzene, toluene and xylene isomers in foodstuffs by GC-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)
ASU L 00.00-36/2 2004-07	Analysis of foodstuffs – Determination of bromide residues in low-fat foodstuffs – Part 2: Determination of inorganic bromide (Deviation: <i>Analysis by GC/MS</i>)
ASU L 00.00-115 2018-10	Analysis of foodstuffs – Multiple analytical method for 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
ASU L 00.00-164 2018-06	Analysis of foodstuffs – Determination of plant protection product residues in foodstuffs of animal origin by LC-MS/MS after acetonitrile extraction/partitioning and clean-up using dispersive SPE (Deviation: <i>Also applies to GC-MS</i>)
ASU L 13.04-1 2006-12	Analysis of foodstuffs – Determination of low-boiling halogenated hydrocarbons in edible oils (Deviation: <i>Also applies to other foodstuffs, analysis by headspace GC-MS</i>)
ASU L 46.00-4 2016-03	Examination of foodstuffs – Determination of furan in coffee and coffee products using headspace gas chromatography and mass spectrometry (adoption of standard of the same name, DIN EN 16620, June 2015 edition)
EURL-FV 2013-M8	Pesticide analysis in teas and chamomile by liquid chromatography and gas chromatography tandem mass spectrometry
PAW 060 2018-03	Determination of plasticisers in foodstuffs by GC-MS/MS
PAW 080 2020-01	Determination of halogen anisoles TCA and TBA in wine by GC-MS/MS

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Valid from: 02.07.2020

Date of issue: 02.07.2020

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PAW 084 2013-03	Determination of phosphane (phosphine) in foodstuffs by headspace GC-MS
PAW 086 2015-04	Determination of bisphenol A and F in foodstuffs by LC-MS/MS or alternatively GC-MS/MS
PAW 089 2015-05	Determination of benzene in foodstuffs and beverages by headspace GC-MS
PAW 093 2018-11	Determination of ethyl carbamate in wine and spirits by GC-MS/MS or LC-MS/MS

2 Sensory analysis of foodstuffs

ASU L 00.90-6 2015-06	Analysis of foodstuffs – Sensory analysis – Simple descriptive test (Deviation: <i>Here only simple descriptive test to determine commercial quality, no sampling, no coding, test area and test equipment not in accordance with DIN 10962 or DIN 10956; no separate test report</i>)
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3 Physical, physico-chemical and chemical analysis of straight feedingstuffs

3.1 Detection and determination of residues and contaminants by liquid chromatography (LC) with mass-selective detectors (triple quad, ion trap) **

ASU L 00.00-76 2008-12	Analysis of foodstuffs – Determination of chlormequat and mepiquat in low-fat foodstuffs – LC-MS/MS method (Deviation: <i>Here for straight feedingstuffs and fatty straight feedingstuffs</i>)
ASU L 00.00-115 2018-10	Analysis of foodstuffs – Multiple analytical method for 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 (Deviation: <i>Here for straight feedingstuffs</i>)

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ASU L 15.00-9 2014-02	Analysis of foodstuffs – Determination of deoxynivalenol in cereals and cereal products and cereal-based foods for infants and young children, HPLC method with clean-up on an immunoaffinity column and UV detection (Deviation: <i>also applies to straight feedingstuffs, detection with LC-MS/MS</i>)
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 (Deviation: <i>Also applies to straight feedingstuffs, detection with LC-MS/MS</i>)
ASU L 15.05-3 2006-09	Analysis of foodstuffs – Determination of fumonisin B1 and B2 in maize products – HPLC method with immunoaffinity column clean-up (adoption of standard of the same name DIN EN 14352, October 2004 edition) (Deviation: <i>Also applies to straight feedingstuffs, detection with LC-MS/MS</i>)
ASU L 48.02-3 2011-01	Analysis of foodstuffs – Determination of zearalenone in cereal-based foods for infants and young children – HPLC method with clean-up on an immunoaffinity column (Deviation: <i>Also applies to straight feedingstuffs, detection With LC-MS/MS</i>)
EURL – SRM QuPPE-PO 2019-05	Quick Method for the Analysis of Numerous Highly Polar Pesticides in Food Involving Extraction with Acidified Methanol and LC-MS/MS Measurement I. Food of Plant Origin (Deviation: <i>Also applies to straight feedingstuffs</i>)
PAW 054 2017-01	Determination of T-2 and HT-2 toxin in cereals and cereal products by LC-MS/MS (Deviation: <i>Also applies to straight feedingstuffs</i>)
PAW 073 2015-03	Determination of acidic herbicides in foodstuffs by LC-MS/MS (Deviation: <i>Also applies to straight feedingstuffs</i>)
PAW 078 2015-07	Determination of glyphosate, AMPA (aminomethylphosphonic acid) and glufosinate in foodstuffs by LC-MS/MS (Deviation: <i>Also applies to straight feedingstuffs</i>)

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3.2 Detection and determination of pesticide residues by gas chromatography (GC) with mass-selective detectors (MS, MS/MS)*

ASU L 00.00-115
2018-10

Analysis of foodstuffs – Multiple analytical method for 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
(Deviation: *Also applies to straight feedingstuffs*)

4 Physical, physico-chemical and chemical analysis of other biological materials from agriculture and horticulture

4.1 Detection and determination of residues by liquid chromatography (LC) with mass-selective detectors (triple quad, ion trap)**

ASU L 00.00-76
2008-12

Analysis of foodstuffs – Determination of chlormequat and mepiquat in low-fat foodstuffs – LC-MS/MS method
(Deviation: *Also applies to other biological materials from agriculture and horticulture*)

ASU L 00.00-115
2018-10

Analysis of foodstuffs – Multiple analytical method for 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
(Deviation: *Here also for other biological materials from agriculture and horticulture*)

EURL – SRM
QuPPE-PO
2019-05

(Deviation: *Here also for other biological materials from agriculture and horticulture*)

PAW 073
2015-03

Determination of acidic herbicides in foodstuffs by LC-MS/MS
(Deviation: *Also applies to other biological materials from agriculture and horticulture*)

PAW 078
2015-07

Determination of glyphosate, AMPA (aminomethylphosphonic acid) and glufosinate in foodstuffs by LC-MS/MS
(Deviation: *Here also for other biological materials from agriculture and horticulture*)

-Translation-

4.2 Detection and determination of pesticide residues by gas chromatography (GC) with mass-selective detectors (MS, MS/MS) *

ASU L 00.00-115 2018-10	Analysis of foodstuffs – Multiple analytical method for 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 (Deviation: <i>Here also for other biological materials from agriculture and horticulture</i>)
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Abbreviations used:

ASU	Amtliche Sammlung von Untersuchungsverfahren (Official Collection of Test Methods) on the basis of § 64 LFGB (German Food and Feed Act)
DIN	Deutsches Institut für Normung e.V. (German Institute for Standardization)
EN	European standard
EURL – SRM	EU Reference Laboratory for Pesticides Requiring Single Residue Methods
GifHP	General Inspectorate for Health Protection, Ministry of Public Health, Welfare and Sport, The Netherlands, Analytical Methods for Pesticide Residues in Foodstuffs
ICC Standard	Standard methods of the International Society for Cereal Science and Technology
LFGB	Lebensmittel- und Futtermittelgesetzbuch (German Food and Feed Act)
OIV	Organisation Internationale de la Vigne et du Vine
PAW	In-house method of KWALIS GmbH
SLB	Schweizerisches Lebensmittelbuch (Swiss Food Code)

-Translation-

Valid from: 02.07.2020

Date of issue: 02.07.2020