

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-14076-01-00 according to DIN EN ISO/IEC 17025:2005

Period of validity: 05.12.2017 to 30.09.2020

Date of issue: 05.12.2017

Holder of certificate:

Eurofins CLF Specialised Nutrition Testing Services GmbH
Professor-Wagner-Straße 11, 61381 Friedrichsdorf, Germany

Tests in the fields:

sensory, physical, physico-chemical, chemical, microbiological, immunological and molecular biological analysis of foodstuffs;
physical, physico-chemical, chemical, microbiological, immunological and molecular biological analysis of feedstuffs;
microbiological analysis of fitment and utensils in food production

Abbreviations used: see last page

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

*** the free choice of standard or equivalent testing methods.**

**** the modification, development and refinement of testing methods.**

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

The listed test methods are exemplary. The laboratory maintains a current list of all test methods within a flexible scope of accreditation.

- 1 Foodstuffs**
- 1.1 Physical, physico-chemical and chemical analysis**
- 1.1.1 Liquid chromatography (LC)**
- 1.1.1.1 Determination of ingredients, additives, residues and contaminants using liquid chromatography (LC) with conventional detectors (HPAEC-PAD, RI, UV, FL, DAD detector) in foodstuffs ****

DIN EN 12821 2009-08	Foodstuffs - Determination of vitamin D by high performance liquid chromatography - Measurement of cholecalciferol (D ₃) or ergocalciferol (D ₂) <i>(Deviation: Eluent preparative HPLC modified, purity of the standards taken from certificate, preparation optimised: One extraction with petroleum ether, neutralisation with 10 µl formic acid, evaporation of defined volume of extract, usually single determination)</i>
DIN EN 12822 2014-08	Foodstuffs - Determination of vitamin E by high performance liquid chromatography - Measurement of α-, β-, γ- and δ-tocopherols <i>(Deviation: Calibration only for α-tocopherol, no correction factor for HPLC, one extraction & neutralisation, evaporation of a defined volume of petroleum ether, combined HPLC measurement with vitamin A)</i>
DIN EN 12823-1 2014-08	Foodstuffs - Determination of vitamin A by high performance liquid chromatography - Part 1: Measurement of all-E-retinol and 13-Z-retinol <i>(Deviation: Calibration only for retinol & retinol palmitate, no correction factor for HPLC, one extraction & neutralisation, evaporation of a defined volume of petroleum ether, combined HPLC measurement with vitamin E)</i>
DIN EN 14122 2014-08	Foodstuffs - Determination of vitamin B1 by high performance liquid chromatography <i>(Deviation: Hydrolysis conditions, reagents and enzyme selection, automated SPE pretreatment using C18 cartridge, optimised HPLC conditions, simultaneous measurement with vitamin B2 and B6, post-column derivatisation for the detection of vitamin B1)</i>

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DIN EN 14148 2003-10	Foodstuffs - Determination of vitamin K1 by high performance liquid chromatography (Deviation: <i>Purity of standards taken from certificate, reagent quantities optimised, HPLC conditions optimised, usually single determination</i>)
DIN EN 14152 2014-08	Foodstuffs - Determination of vitamin B2 by high performance liquid chromatography (Deviation: <i>Hydrolysis conditions, reagents and enzyme selection, automated SPE pretreatment using C18 cartridge, optimised HPLC conditions, simultaneous measurement with vitamin B1 and B6</i>)
DIN EN 14663 2006-03	Foodstuffs - Determination of vitamin B6 (including glucosidic bound compounds) with HPLC (Deviation: <i>Hydrolysis conditions, reagents and enzyme selection, automated SPE pretreatment using C18 cartridge, optimised HPLC conditions, simultaneous measurement with vitamin B1 and B2</i>)
AOAC 997.08 2013	Fructans in Food Products (Ion Exchange Chromatographic Method) (Deviation: <i>Glucose is taken into account mathematically, other eluent composition, shortened gradient programme</i>)
AOAC 2011.09 2011	Determination of vitamin B12 in foods for infants and adults (Deviation: <i>Matrix also solid and liquid foods for special medical purposes and in milk cereals</i>)
AOAC 2011.20 2014	5'-Mononucleotides in Infant Formula and Adult/ Pediatric Nutritional Formula (Deviation: <i>Precipitation of proteins with 5 ml acetic acid (0.5 %), elution of analytes with larger volumes of phosphate buffer</i>)
AOAC 2012.22 2013	Vitamin C in Infant Formula and Adult/Pediatric Nutritional Formula (Deviation: <i>Use of meta-phosphoric acid instead of trichloroacetic acid, measurement at 243 instead of 265 nm, changed mobile phase</i>)
ASU L 26.00-1 2016-03	Analysis of foodstuffs - Determination of nitrate content in vegetables and vegetable products (Deviation: <i>HPLC method only</i>)
ASU L 49.07-1 1985-05	Analysis of foodstuffs; Determination of amino acids in amino acid mixtures (Deviation: <i>Matrix also dietary foods; analytes are only free amino acids</i>)

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ASU L 49.07-2 1986-11	Analysis of foodstuffs; Determination of the amino acid content in dietary foods on the basis of protein hydrolyzates <i>(Deviation: Matrix also other dietary foods; reagent amounts and hydrolysis conditions optimised, neutralisation instead of rotation after hydrolysis)</i>
ASU L 49.07-3 1989-05	Analysis of foodstuffs; Determination of the tryptophan content in dietary foods on the basis of protein hydrolyzates <i>(Deviation: Matrix also dietary foods; sampletube not evacuated before hydrolysis, sample dissolved in acid buffer after hydrolysis & neutralisation)</i>
N02_01ME 2014-04	Determination of mono and disaccharides in dietary foods by HPLC
N02_09ME 2016-10	Determination of the content of galactooligosaccharides (GOS) in infant milk, base powders for their preparation and solid amino acid-based FSMP by high performance anion exchange chromatography with pulsed amperometric detection (HPAEC-PAD)
N04_06ME 2015-04	Determination of niacin in selected dietary foods by HPLC
N04_12ME 2016-12	Determination of vitamin B12 in baby food (milk diets), FSMP (food for special medical purposes), vitamin premixes and cereals as well as milk cereals by HPLC after purification on an immunoaffinity column
N04_14ME 2017-03	Determination of biotin in selected foods by HPLC-FD after purification on an immunoaffinity column
N04_15ME 2015-04	Determination of folic acid in powdered milk-based infant formula, solid FSMP (food for special medical purposes) and vitamin premixes by HPLC-UV after purification on an immunoaffinity column
N05_02ME 2015-05	Determination of the total cystine content in dietary foods by means of an amino acid analyzer
N05_04ME 2015-05	Determination of the content of taurine in dietary foods and vitamin premixes by means of an amino acid analyzer
N09_18ME 2015-04	Determination of nucleotides in milk-based baby food, nucleotide mixtures & FSMP by HPLC-UV

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R02_03ME 2012-11	Determination of aflatoxin M1 in milk and milk products (baby food) by HPLC after purification on an immunoaffinity column
R02_04ME 2010-06	Determination of patulin in fruit-containing foods by HPLC
R02_10ME 2013-01	Determination of ochratoxin A and aflatoxin B1, B2, G1 and G2 in baby food, cereals and cocoa by HPLC after purification on an immunoaffinity column

1.1.1.2 Determination of ingredients, additives, residues and contaminants by liquid chromatography (LC) with mass selective detectors (MS/MS detector) in foodstuffs **

DIN EN 15055 2006-08	Non-fatty foods - Determination of chlormequat and mepiquat - LC-MS/MS method <i>(Deviation: Water content of the sample not taken into account, sample weight and volume of the extractant standardised, additional purification of the extract by SPE)</i>
DIN EN 15662 2009-02	Foods of plant origin - Determination of pesticide residues using GC-MS and/or LC-MS/MS after acetonitrile extraction/partitioning and clean-up by dispersive SPE - QuEChERS-method <i>(Deviation: Matrix also babysitting and dietary adult food; SPE conditions changed, acidification of the extract with acetic acid, quantification via internal standard)</i>
AOAC 2012.16 2015	Pantothenic Acid (Vitamin B5) in Infant Formula and Adult/Pediatric Nutritional Formula <i>(Deviation: Different solution, lower flow rate, identification on the basis of several mass transitions)</i>
AOAC 2013.13 2013	Folate in Infant Formula and Adult/Pediatric Nutritional Formula <i>(Deviation: Sample preparation, other separation column, modified gradient)</i>
AOAC 2016.05 2016	Fortified milk powders, infant milk formula, and adult nutritionals - Determination of vitamin D by liquid chromatography-mass spectrometry <i>(Deviation: Dissolution of derivatisation reagent in acetonitrile instead of acetone)</i>
N04_13ME 2015-04	Determination of carnitine in milk and milk products (including baby food) by LC-MS/MS

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N04_20ME 2017-10	Quantitative determination of vitamin B1, B2, B3, B5 and B6 in selected foods by LC-MS/MS
R01_09ME 2015-04	Determination of ETU and PTU in fruits, vegetables, cereals and baby food b LC-MS/MS
R01_12ME 2017-10	Determination of fosetyl-al/phosphonic acid in foods by LC-MS/MS
R01_15ME 2017-10	Determination of maleic hydrazide in plant-based foodstuffs by LC-MS / MS
R02_09ME 2015-05	Determination of deoxynivalenol, zearalenone, T-2 toxin and HT-2 toxin, by LC-MS/MS in baby food and raw materials for their preparation, such as cereals and ZEA in oils
R02_11ME 2012-03	Determination of fumonisin B1 and B2 toxin by LC-MS/MS in maize
R02_12ME 2017-10	Determination of alternarial toxins (AOH, AME, ALT, TEN, TEA) in cereal and cereal products as well as in juices and purees
R02_13ME 2017-10	Determination of patulin in fruit preparations by UHPLC-MS/MS
R05_05ME 2016-09	Determination of quaternary ammonium compounds in selected foods by LC-MS/MS Determination of quaternary ammonium compounds in milk powder and liquid milk b LC-MS/MS
R05_06ME 2017-09	Determination of chlorate and perchlorate in plant-based foodstuffs by LC-MS/MS

1.1.2 Gas chromatography (GC)

1.1.2.1 Determination of ingredients, additives and plant protection product residues by gas chromatography (GC) with conventional detectors (FI, FP detector) in foodstuffs **

DIN EN 12393-3 2014-01	Foods of plant origin - Multiresidue methods for the determination of pesticide residues by GC or LC-MS/MS - Part 3: Determination and confirmatory tests
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NHFPC GB 5413.25 2010-03	National food safety standard for the determination of inositol in food intended for infants and children, milk and milk products (Deviation: <i>Matrix also other dietary foods; blow-off of solvent has been optimised, derivatisation in the heater block; optimised chromatographic conditions</i>)
AOAC 2012.13 2012	Determination of the content of labelled fatty acids in milk products and baby food
ASU L 00.00-47 1999-11	Analysis of foodstuffs - Determination of ethephon by headspace gas chromatography in plant-based foodstuffs
R01_01ME 2015-04	Determination of plant protection product residues in selected foodstuffs

1.1.2.2 Determination of residues and contaminants by gas chromatography with mass spectrometry (GC-MS) in foodstuffs **

R01_08ME 2016-11	Determination of acidic herbicides in selected foodstuffs by GC/MS
R05_04ME 2012-11	Determining polycyclic aromatic hydrocarbons in foodstuffs by GC-GC/MS
R07_01ME 2016-11	Determination of MCPD esters and glycidyl esters in fats, oils and milk powder (including baby food) by GC-MS
R07_02ME 2017-02	Determination of MCPD esters and glycidylestern in fats and oils by GC-MS

1.1.2.3 Sample preparation for analysis by gas chromatography (GC) in foodstuffs ***

DIN EN 12393-2 2014-03	Foods of plant origin - Multiresidue methods for the determination of pesticide residues by GC or LC-MS/MS - Part 2: Methods for extraction and cleanup (Deviation: <i>Matrix also vegetable, animaland fatty foods; addition of a reagent prior to GPC purification, summaryof fractionation steps in mini-silica gel-purification and adaptation of the elution solvent quantities</i>)
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1.1.3 Determination of elements by atomic absorption spectrophotometry (CV-, GF-AAS) in foodstuffs **

DIN EN 13806
2002-11 Foodstuffs - Determination of trace elements - Determination of mercury by cold-vapour atomic absorption spectrometry (CVAAS) after pressure digestion
(Deviation: *No use of potassium permanganate solution*)

R03_01ME
2016-03 Determination of lead and cadmium in dietary foods b solid AAS

R03_04ME
2015-04 Determination of aluminium in selected foods by solid AAS

1.1.4 Determination of elements by atomic emission spectrometry with inductively coupled plasma (ICP-OES) in foodstuffs **

E DIN EN 16943
2016-01 Foodstuffs - Determination of elements and their chemical species - Determination of minerals by ICP-OES
(Deviation: *No ionisation buffer, except for special samples no use of hydrochloric acid under pressure digestion*)

ASU L 15.06-2
2013-01 Analysis of foodstuffs - Determination of inorganic arsenic in rice by hydride atomic absorption spectrometry (hydride-AAS) after acid extraction
(Deviation: *Matrix also other cereals and oils*)

R03_07ME
2015-05 Determination of aluminium in selected foodstuffs using ICP-OES

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

DIN EN 15111
2007-06 Foodstuffs - Determination of trace elements - Determination of iodine by ICP-MS

N06_13ME
2013-02 Determination of chromium and molybdenum in dietary foods and raw materials for their production by ICP-MS

N06_14ME
2014-03 Determination of selenium in selected dietary foods by ICP-MS

R03_09ME Determination of total arsenic in selected dietary foods by ICP-MS
2014-03

1.1.6 Sample preparation for the determination of elements by atomic absorption spectrometry (AAS), inductively coupled plasma atomic emission spectrometry (ICP-OES) and inductively coupled plasma mass spectrometry (ICP-MS) in foodstuffs ***

DIN EN 13805 Foodstuffs - Determination of trace elements - Pressure digestion
2002-06 (Deviation: *Adaptation to microwave*)

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

DIN EN ISO 5537 Determination of water content in milk powder
2004-09 (Deviation: *Use of other sample containers*)

DIN 10342 Determination of fat content of milk and dairy products by the
1992-09 Weibull-Berntrop gravimetric method
(Deviation: *Matrix also food; adaptation to implementation in a fully automatic hydrolysis and extraction device*)

AOAC 991.43 Total, soluble and insoluble dietary fibre in foodstuffs
1995-03 (Deviation: *No degreasing step; implementation with automated fibre analyzer*)

ASU L 02.06-E (EG) and 1 (EG) Analytical methods relating to the composition of certain partly or
to 8 (EG) wholly dried, preserved milk products;
Method 2 Determination of dry content, drying oven 102 °C
1981-01 (Deviation: *Matrix also foodstuffs*)

ASU L 06.00-7 Analysis of foodstuffs - Determination of raw protein content in
2014-08 meat and meat products - Kjeldahl titrimetric method - Reference
method
(Deviation: *Matrix also fish/fish products, oil seeds and fruit/vegetable products*)

ASU L 17.00-3 Determination of ash in bread including small baked products made
1982-05 of bread dough
(Deviation: *Matrix also foodstuffs*)

ASU L 17.00-15 Analysis of foodstuffs - Determination of raw protein content in
2013-08 bread including small baked products made of bread dough -
Kjeldahl method

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ASU L 48.01-25 1997-01	Analysis of foodstuffs - Determination of fibre in milk-based foods for infants and young children
ASU L 53.00-4 1996-02	Determination of acid-insoluble ash in spices and seasoning ingredients
N01_01ME 2017-02	Determination of the total fat content of selected foodstuffs according to Weibull-Stoldt
N01_04ME 2017-02	Determination of water content (dry content) in selected foodstuffs
N08_10ME 2016-11	Determination of the fill quantity of prepackages by gravimetry

1.1.8 Determination of ingredients and additives by titrimetry in foodstuffs **

DIN EN ISO 5943 2007-01	Cheese and processed cheese - Determination of chloride content - Potentiometric titration method (Deviation: <i>Matrix also dietary foods; dissolution in more water</i>)
DIN EN ISO 8968-1 2014-06	Milk and milk products - Determination of nitrogen content - Part 1: Kjeldahl principle and crude protein calculation
DIN EN ISO 8968-4 2012-12	Milk - Determination of nitrogen content - Part 4: Determination of non-protein nitrogen content (Deviation: <i>Conversion factor is not matrix-dependent</i>)
ASU L 49.00-7 2000-07	Analysis of foodstuffs - Determination of fluoride in dietary foods with the ion-sensitive electrode (Deviation: <i>Matrix also selected foods, dissolution without ultrasonic bath, triple standard addition, use of a titrator</i>)
N01_02ME 2015-01	Protein determination in selected foods according to Kjeldahl
N04_02ME 2014-11	Potentiometric determination of L-ascorbic acid with 2,6-dichlorophenol-indophenol in foodstuffs

1.1.9 Determination of Ingredients, additives and contaminants by photometry in foodstuffs *

DIN EN ISO 14673-1 2004-05	Milk and milk products - Determination of nitrate and nitrite content - Part 1: Method with cadmium reduction and spectrometry
DIN 10344 1982-08	Determination of lactose and galactose content of milk and milk products - Enzymatic method (Deviation: <i>Matrix also dietary foodstuffs</i>)
ASU L 00.00-49/3 2001-07	Analysis of foodstuffs - Non-fatty foods - Determination of dithiocarbamate and thiuram disulfide residues - Part 3: UV spectrophotometric xanthate method
ASU L 00.00-94 2006-09	Analysis of foodstuffs - Determination of inulin in foods - Enzymatic method (Deviation: <i>No neutralisation</i>)
AOAC 999.14 2003	Choline in infant milk formula and milk (Deviation: <i>Matrix also other dietary foods, vitamin and mineral mixes</i>)

1.1.10 Determination of density by densitometry in liquid foods

N08_05ME 2017-01	Determination of density in liquid foods
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1.1.11 Determination of fill quantity by volumetry in foodstuffs

N08_11ME 2016-11	Determination of the fill quantity of prepackages (volumetric)
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1.1.12 Determination of the number of prepackages in foodstuffs

N09_28ME 2016-11	Determination of the number of prepackages
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1.2 Microbiological analysis

1.2.1 Sample preparation for microbiological analysis of foodstuffs ***

ISO 6887-1
1999-02

Microbiology of food and animal feeding stuffs - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 1: General rules for the preparation of the initial suspension and decimal dilutions
(Deviation: *TSB and Ringer medium also listed, 2h resuscitation*)

1.2.2 Determination and detection of bacteria, moulds and yeasts by cultural microbiological analysis in foodstuffs **

ISO 4831
2006-08

Microbiology - Horizontal method for the detection and enumeration of coliforms - MPN technique

ISO 4832
2006-02

Microbiology - Horizontal method for the detection and enumeration of coliforms - Colony count technique

ISO 4833-1
2013-09

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
(Deviation: *Supplementation of TTC as required, anaerobic agar: Schaedler agar*)

ISO 6611
2004-10

Milk and milk products - Enumeration of colony-forming units of yeasts and/or moulds - Colony-count technique at 25 degrees C
(Deviation: *Matrix also dietary foods; evaluation after 4d, use of RIDA COUNT cards is optional*)

ISO 7932
2004-06

Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of presumptive *Bacillus cereus* - Colony-count technique at 30 degrees C
(Deviation: *Additional molecular biological identification*)

ISO 10273
2003-06

Microbiology of food and animal feeding stuffs - Horizontal method for the detection of presumptive pathogenic *Yersinia enterocolitica*
(Deviation: *Selective enrichment in BPW, CIN agar plates incubated at 37 °C*)

ISO 13720
2010-08

Meat and meat products - Enumeration of presumptive *Pseudomonas* spp.
(Deviation: *Matrix also selected foodstuffs; enrichment in nutrient no. 2 + CFC supplement, incubation temperature*)

ISO 15213 2003-05	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of sulphite-reducing bacteria growing under anaerobic conditions (Deviation: <i>Possibility of pasteurisation, single determination</i>)
ISO 21528-2 2004-08	Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of Enterobacteriaceae - Part 2: Colony-count method (Deviation: <i>Addition of EEB after 2h resuscitation</i>)
ISO 21871 2006-04	Microbiology of food and animal feeding stuffs - Horizontal method for the determination of low numbers of presumptive <i>Bacillus cereus</i> - Most probable number technique and detection method (Deviation: <i>Enrichment also possible in BPPW</i>)
ISO/TS 22964 2006-02	Milk and milk products - Detection of <i>Enterobacter sakazakii</i> (Deviation: <i>Matrix also dietary foods; use of DFI agar, identification options</i>)
ISO 29981 2010-02	Milk products - Enumeration of presumptive bifidobacteria - Colony count technique at 37 degrees C
DIN EN ISO 6579 2007-10	Microbiology of food and animal feeding stuffs - Horizontal method for the detection of <i>Salmonella</i> spp. (Deviation: <i>For the use of DIASALM instead of RVS+MKTTn, confirmation by LIA, HEA</i>)
DIN EN ISO 6888-1 2003-12	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) - Part 1: Technique using Baird-Parker agar medium
DIN EN ISO 6888-2 2003-12	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) - Part 2: Technique using rabbit plasma fibrinogen agar medium
DIN EN ISO 6888-3 2005-07	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) - Part 3: Detection and MPN technique for low numbers (Deviation: <i>GC is used without additives, GC tubes are not heated, Rapid-Latex test added for confirmation</i>)

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DIN EN ISO 7937 2004-11	Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of <i>Clostridium perfringens</i> - Colony-count technique (Deviation: <i>Enrichment in RPM, reverse camp test from DIN 10103:1993</i>)
DIN EN ISO 11290-1 2005-01	Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of <i>Listeria monocytogenes</i> - Part 1: Detection method (Deviation: <i>Selective agar: RAPIL L'MONO, no streaking of the first enrichment, confirmation via API Listeria or Maldi-TOF</i>)
DIN ISO 21528-1 2009-12	Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of Enterobacteriaceae - Part 1: Detection and enumeration by MPN technique with pre-enrichment
M01_09ME 2011-11	<i>Escherichia coli</i> - Determination
M01_11ME 2015-10	Sulphite reducing clostridia (SRC) - Enumeration
M01_12ME 2014-09	Enterococci - Detection
M01_13ME 2014-10	Enterococci - Enumeration
M01_19ME 2012-05	Mesophilic thermoresistant spore formers (MTS, 10 min, 80 °C) - Enumeration
M01_35ME 2012-05	Thermophile thermoresistant spore formers (TTS, 10 min, 80 °C) - Enumeration
M01_47ME 2015-08	<i>Listeria monocytogenes</i> - Detection in foodstuffs
M01_48ME 2015-12	<i>Salmonella</i> - Detection in foodstuffs
M01_49ME 2015-12	Living germ count at 30 °C in foodstuffs

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M01_52ME 2015-12	E. coli - Enumeration in foodstuffs
M01_53ME 2015-12	Enterobacteriaceae - Enumeration in foodstuffs
M01_54ME 2015-08	Listeria monocytogenes - Enumeration in foodstuffs
M01_62ME 2015-11	Bacillus cereus - Enumeration in foodstuffs
M01_63ME 2015-11	Coliforms - Enumeration in foodstuffs
M01_64ME 2015_11	Yeasts and moulds in foodstuffs
M01_65ME 2016-10	Clostridium perfringens - Enumeration in foodstuffs
M01_66ME 2016-10	Lactobacilli ´ - Enumeration
M01_67ME 2016-10	Sulphite-reducing clostridia under anaerobic conditions - Enumeration in foodstuffs
M02_09ME 2011-11	Identification of isolated strains of the Enterobacteriaceae group, gram-negative non-Enterobacteriaceae, Listeria ssp., Staphylococcus spp., Streptococcus spp. as well as gram-positive bacteria

1.2.3 Determination and detection of bacteria by impedance measurement in foodstuffs *

DIN 10120 2001-07	Analysis of foodstuffs - Detection of Salmonella with impedance- method (Deviation: <i>Only 1 selective medium, RiboFlow assay for confirmation</i>)
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DIN 10122 2005-09	Analysis of foodstuffs - Enumeration of microorganisms by means of impedance-method - Determination of aerobic mesophile bacterial count (Deviation: <i>Incubation at 37 °C, calibration only for semi-quantitative determinations, use of BiMedia 001B</i>)
DIN ISO 21528-1 2009-12	Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of Enterobacteriaceae - Part 1: Detection and enumeration by MPN technique with pre-enrichment (Deviation: <i>Detection with impedance method BacTrac; analytes also gall-resistant, gram-negative bacteria</i>)
ISO/TS 22964 2006-02	Milk and milk products - Detection of Enterobacter sakazakii (Deviation: <i>Matrix also dietary foods; detection with BacTrac impedance method</i>)

1.2.4 Detection of bacteria by MALDI-TOF in foodstuffs

M02_27ME 2015-04	Detection of isolated strains by MALDI-TOF
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1.2.5 Determination of vitamins by microbiological testing systems in foodstuffs *

r-Biopharm, VitaFast® pantothenic acid, P1005 2013-10	Microbiological microtiter plate test for the determination of the total content of pantothenic acid (added and natural pantothenic acid) in dietary foods
r-Biopharm, VitaFast® folic acid, P1001 2011-06	Microbiological microtiter plate test for the determination of the total content of folic acid (added and natural folic acid) in foodstuffs, feedstuffs and pharmaceutical products (Deviation: <i>(Matrix here only foodstuffs)</i>)

1.3 Immunological analysis

1.3. Determination of bacteria and allergens by enzyme immunoassay (ELISA) in foodstuffs *

bioMérieux VIDAS® Listeria monocytogenes Xpress 2013-04	Detection of Listeria monocytogenes with VIDAS® L. monocytogenes Xpress (LMX)
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<p>ELISA SYSTEMS Beta-Lactoglobulin Residue (BL) Test ESMRDBLG-48 2010-05</p>	<p>Determination of beta-lactoglobulin residues by ELISA</p>
<p>ELISA SYSTEMS Soy protein residue Test ESSOYPRD-48 2012-06</p>	<p>Determination of soy protein residues by ELISA</p>
<p>R-Biopharm AG RIDASCREEN® Gliadin R7001 2007-01</p>	<p>Sandwich enzyme immunoassay (ELISA) for the quantitative determination of contamination by prolamins from wheat (gliadin), rye (secalin) and barley (hordein) in raw materials such as flour (buckwheat, rice, maize, oats, teff) and in processed foods such as pasta, ready meals, bakery products, sausages, beverages and ice cream</p>
<p>R-Biopharm AG RIDASCREEN® Fast Casein R4612 2013-11</p>	<p>Sandwich enzyme immunoassay for the quantitative determination of casein in foodstuffs such as ice cream, wine, chocolate, beverages, baby food, bakery products, sausages and baking mixes</p>

1.4 Molecular biological analysis

1.4.1 Detection of nucleic acids by multiplex PCR in foodstuffs

<p>M02_22ME 2014-10</p>	<p>Molecular detection of Clostridium botulinum toxin genes A, B, E and F with Multiplex polymerase chain reaction (PCR) technology from SRC</p>
<p>M02_23ME 2014-10</p>	<p>Molecular detection of Clostridium botulinum toxin genes A, B, E and F with Multiplex polymerase chain reaction (PCR) technology from enrichment</p>

1.5 Sensory analysis

1.5.1 Simply descriptive tests of foodstuffs

<p>ASU L 00.90-6 2014-11</p>	<p>Analysis of foodstuffs - Sensory analysis - Simple descriptive test</p>
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2 Feedstuffs

2.1 Physical, physico-chemical and chemical analysis

2.1.1 Determination of Ingredients by liquid chromatography (LC) with conventional detectors (UV detectors) in pet food **

ASU L 49.07-2
1986-11 Analysis of foodstuffs; Determination of the amino acid content in dietary foods on the basis of protein hydrolyzates
(Deviation: *Matrix also pet food; reagent amounts and hydrolysis conditions optimised, neutralisation instead of rotation after hydrolysis*)

ASU L 49.07-3
1989-05 Analysis of foodstuffs; Determination of the tryptophan content in dietary foods on the basis of protein hydrolyzates
(Deviation: *Matrix also pet food; sample tube not evacuated before hydrolysis, sample dissolved in acid buffer after hydrolysis & neutralisation*)

N05_02ME
2015-05 Determination of the total cystine content in pet food by amino acid analyzer

N05_04ME
2015-05 Determination of the content of taurine in pet food by amino acid analyzer

2.1.2 Determination of fatty acids by gas chromatography (GC) with conventional detectors (FID detector) in pet food

N07_05ME
2016-10 Qualitative and quantitative determination of fatty acids in pet food by capillary gas chromatography

2.1.3 Determination of ingredients in pet food by titrimetry ***

ASU F 0003 (EG)
2010-09 Analysis of feedstuffs - Determination of crude protein in feedstuffs - Kjeldahl method - 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 (OJ EC L 54/1 of 26.02.2009)

2.1.4 Determination of ingredients by gravimetry in pet food ***

ASU F 0001 (EG)
2010-09 Analysis of feedstuffs - Determination of moisture 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 (OJ EC L 54/1 of 26.02.2009)

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 (OJ EC L 54/1 of 26.02.2009)

ASU F 0010 (EG)
2010-09 Analysis of feedstuffs - Determination of crude fibre 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 (OJ EC L 54/1 of 26.02.2009)

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 (OJ EC L 54/1 of 26.02.2009)

2.1.5 Determination of calorific value by calorimeter in pet food ***

N01_13ME
2017-10 Determination of calorific value with the calorimeter and calculation of the calorific value in feedstuffs

2.2 Microbiological analysis

2.2.1 Determination and detection of bacteria by cultural microbiological analysis in pet food ***

DIN EN ISO 6579
2007-10 Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp.

2.2.2 Sample preparation for microbiological analysis of pet food ***

ISO 6887-1
1999-02

Microbiology of food and animal feeding stuffs - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 1: General rules for the preparation of the initial suspension and decimal dilutions
(Deviation: *TSB and Ringer medium also listed, 2h resuscitation*)

2.3 Molecular biological analysis

2.3.1 Detection of nucleic acids by multiplex PCR in pet food

M02_22ME
2014-10

Molecular detection of Clostridium botulinum toxin genes A, B, E and F with Multiplex polymerase chain reaction (PCR) technology from SRC

M02_23ME
2014-10

Molecular detection of Clostridium botulinum toxin genes A, B, E and F with Multiplex polymerase chain reaction (PCR) technology from enrichment

3 Fitment and utensils in food production

3.1 Microbiological analysis

3.1.1 Sample preparation for microbiological analysis of fitment and utensils in food production ***

ISO 6887-1
1999-02

Microbiology of food and animal feeding stuffs - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 1: General rules for the preparation of the initial suspension and decimal dilutions
(Deviation: *TSB and Ringer medium also listed, 2h resuscitation*)

3.1.2 Determination and detection of bacteria by cultural bacteriological analysis in fitment and utensils in food production *

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
(Deviation: *Matrix also fitment and utensils in food production; supplementation of TTC as required, anaerobic agar: Schaedler agar*)

ISO/TS 22964 2006-02	Milk and milk products - Detection of <i>Enterobacter sakazakii</i> (Deviation: <i>Matrix also fitment and utensils in food production; use of DFI agar, confirmation by Tween 80 esterase activity and alpha-glucosidase, identification options</i>)
DIN EN ISO 6579 2007-10	Microbiology of food and animal feeding stuffs - Horizontal method for the detection of <i>Salmonella</i> spp. (Deviation: <i>Matrix also fitment and utensils in food production; for the use of DIASALM instead of RVS+MKTTn, confirmation by LIA, HEA</i>)
ASU B 80.00-1 1998-01	Investigation of commodities - Determination of surface colony count on fitment and utensils in food areas - Part 1: Quantitative swab method (adoption of the eponymous German standard DIN 10113-1, July 1997 edition) (Deviation: <i>Prolonged extraction, method extended to sponges, semi-quantitative procedure limited to detection</i>)
ASU B 80.00-2 1998-01	Investigation of commodities - Determination of surface colony count on fitment and utensils in food areas - Part 2: Semi-quantitative swab method (adoption of the eponymous German standard DIN 10113-2, July 1997 edition) (Deviation: <i>Prolonged extraction, method extended to sponges</i>)
ASU B 80.00-3 1998-01	Investigation of commodities - Determination of surface colony count on fitment and utensils in food areas - Part 3: Semi-quantitative method with culture media laminated taking-up equipment (squeeze method) (adoption of the eponymous German standard DIN 10113-3, July 1997 edition)

3.1.3 Determination and detection of germ content by impedance measurement in fitment and utensils in food production *

ISO/TS 22964 2006-02	Milk and milk products - Detection of <i>Enterobacter sakazakii</i> (Deviation: <i>Matrix also fitment and utensils in food production; detection with BacTrac impedance method</i>)
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DIN ISO 21528-1
2009-12

Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of Enterobacteriaceae - Part 1: Detection and enumeration by MPN technique with pre-enrichment
(Deviation: *Matrix also fitment and utensils in food production; detection with BacTrac impedance method, analytes also gall-resistant, gram-negative bacteria*)

DIN 10120
2001-07

Analysis of foodstuffs - Detection of Salmonella with impedance-method
(Deviation: *Matrix also fitment and utensils in food production; only 1 selective medium, RiboFlow assay for confirmation*)

Abbreviations used:

AOAC	AOAC International
ASU	Amtliche Sammlung von Untersuchungsverfahren (Official Collection of Test Methods)
DIN	Deutsches Institut für Normung (German Institute for Standardization)
GB	National Standard of People's Republic of China
EN	European standard
FSMP	Food for special medical purposes
IEC	International Electrotechnical Commission
ISO	International Organisation for Standardisation
NHFPC	National Health and Family Planning Commission of the PRC (China)
	Services GmbH
TS	Technical specification
BXX_XXME	In-house method of Eurofins CLF Specialised Nutrition Testing Services GmbH
MXX_XXME	In-house method of Eurofins CLF Specialised Nutrition Testing Services GmbH
NXX_XXME	In-house method of Eurofins CLF Specialised Nutrition Testing Services GmbH
RXX_XXME	In-house method of Eurofins CLF Specialised Nutrition Testing