

Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-14170-01-03 according to DIN EN ISO/IEC 17025:2018

Valid from: 13.01.2023

Date of issue: 25.07.2023

This annex is a part of the accreditation certificate D-PL-14170-01-00.

Holder of partial accreditation certificate:

GBA Gesellschaft für Bioanalytik mbH
Goldtschmidtstraße 5
21073 Hamburg, Germany

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 and chemical analysis of sewage sludge, sludges, waste, soils, compost, sediments, biota, soil gas, waste oils, wood waste, dusts

Ecotoxicological analysis of waste and compost

Selected cultural plant–based analysis of biowaste

Sampling of leachate, sludge, sewage sludge, soils, soil gas, sediments, compost and waste

Sampling, sample preparation and analysis of waste in accordance with the German Landfill Ordinance, Annex 4;

Specialist modules for soil and contaminated sites and for waste

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>.

Abbreviations used: see last page

Page 1 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Valid for the locations:

Harburger Ring 17, 21073 Hamburg¹⁾
Stätzlinger Str. 70, 86165 Augsburg¹⁾
Magnusstraße 11, 12489 Berlin
Meißner Ring 3, 09599 Freiberg
Bruchstraße 5c, 45883 Gelsenkirchen
Glückaufstraße 56, 45896 Gelsenkirchen (Scholven)
Im Emscherbruch 11, 45699 Herten
Daimlerring 37, 31135 Hildesheim
Schelsenweg 24 a, 41238 Mönchengladbach
Mülforter Str. 59, 41238 Mönchengladbach¹⁾
Flensburger Straße 15, 25421 Pinneberg
Hamburger Straße 31, 21224 Rosengarten¹⁾

The test methods are marked with the following symbols for the locations at which they are carried out:

B = Berlin
FG = Freiberg
GE = Gelsenkirchen
HE = Herten
HHGS = Hamburg: Goldtschmidtstraße 5
HI = Hildesheim
MG = Mönchengladbach: Schelsenweg 24a
PI = Pinneberg
SV = Scholven

With the exception of the specialist modules for soil and contaminated sites and for waste, the testing laboratories are permitted to apply the listed standardised or equivalent test methods with different versions of the standards without obtaining prior notification and consent from DAkKS.

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

***) Freely select standard test methods or equivalent test methods.**

*****) Modify test methods and develop new test methods.**

The test methods listed are given by way of example.

The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation.

Valid from: 13.01.2023

Date of issue: 25.07.2023

Table of contents

1	Sampling of leachate	4
2	Waste, wood waste, biowaste/compost, soil, sewage sludge, sludge, sediment, dusts	4
2.1	Sampling.....	4
2.2	Sample pretreatment.....	6
2.3	Atomic- and mass spectrometry of elements.....	11
2.3.1	Atomic absorption spectrometry (K-AAS) of mercury (*: PI)	11
2.3.2	By inductively coupled plasma atomic emission spectrometry (ICP-OES) (*: PI).....	11
2.3.3	By inductively coupled plasma mass spectrometry (ICP-MS) (*: PI,)	12
2.4	Biological activity	12
2.5	Electrode measurement of physical and physico-chemical parameters and of summary indices of actions and substances (*: PI).....	13
2.6	Elemental analysis of elements and of summary indices of actions and substances (*: PI,) ..	14
2.7	Liquid chromatography of organic compounds.....	15
2.7.1	With conventional detectors (HPLC-DAD).....	15
2.7.2	With mass selective detectors (LC-MS/MS) (**: PI).....	15
2.8	Gas chromatography of organic compounds.....	17
2.8.1	With conventional detectors (GC-FID, GC-ECD) (*: PI).....	17
2.8.2	With mass selective detectors (GC-MS; GC-MS/MS) (*: PI)	19
2.9	Gravimetric analysis of physical, physico-chemical indicators and summary indices of actions and substances (*: PI)	26
2.10	Determination of physical properties, inorganic and organic compounds by photometry (PI: *)	29
2.11	Photometry of anions and phenol index with flow and flow rate analysis (*: PI).....	30
2.12	Physical parameters.....	31
2.13	X-ray fluorescence analysis (XRF) for determination of elements in soil	32
2.14	Titrimetric analysis of physico-chemical indicators, summary indices of actions and substances and anions (*: PI)	32
2.15	Volumetric analysis of carbonates in soil and sediment (*: PI)	34
2.16	Analysis of concrete aggressiveness	34
2.17	Sensory tests (odour, taste).....	34
2.18	Parameters characterising effects and substances	35
2.19	Ion chromatography of anions*.....	36
3	Biota – Analysis of bioindicators.....	36
3.1	Liquid chromatography of organic compounds with mass selective detectors (LC-MS/MS) .	36

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

3.2	Gas chromatography of organic compounds with mass selective detectors (GC–MSD, GC–MS/MS) (*: PI).....	37
3.3	Gravimetric analysis of physico–chemical indicators	37
3.4	Titrimetric analysis of summary indices of actions and substances (*: PI).....	37
4	Soil gas and landfill gases	38
4.1	Sampling.....	38
4.2	Gas chromatography of organic compounds.....	38
4.2.1	With conventional detectors (GC–FID, GC–ECD)	38
4.2.2	With mass selective detectors (GC–MS; GC–MS/MS).....	38
5	Test methods for the specialist module for soil and contaminated sites	39
6	Test methods for the specialist module for waste	49
7	Sampling, sample preparation and analysis of waste in accordance with the German Landfill Ordinance, Annex 4 (July 2020).....	63
	Abbreviations used	68

1 Sampling of leachate

DIN 38402–A 11 2009–02	Sampling of waste water (Modification: <i>Leachate matrix</i>)	B, FG, GE, HI, PI, SV
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2 Waste, wood waste, biowaste/compost, soil, sewage sludge, sludge, sediment, dusts

2.1 Sampling

DIN EN ISO 5667–13 (S 1) 2011–08	Water quality – Sampling – Part 13: Guidance on sampling of sludges (Modification: <i>Matrix here also biowaste</i>)	GE, HI, PI
DIN 38414–S 11 1987 08	Sampling of sediments using gouges, box corers, Van Veen grabs, soil pipes	GE, PI
DIN ISO 10381–2 2003–08	Soil quality – Sampling – Part 2: Guidance on sampling techniques	B, PI
DIN ISO 10381–7 2007–10	Soil quality – Sampling – Part 7: Guidance on sampling of soil gas (Restriction: <i>Only variant c in developed borewells</i>)	GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN ISO 18400–102 2020–11	Soil quality – Sampling – Part 102: Selection and application of sampling techniques	B, PI
DIN EN 932–1 1996–11	Test for general properties of aggregates – Part 1: Methods for sampling (Restriction: <i>Matrix only soil</i>)	PI
DIN EN 12579 2000–01	Soil improvers and growing media – Sampling	GE, PI
DIN EN 12579 2014–02	Soil improvers and growing media – Sampling	GE, PI
DIN 19698–1 2014–05	Characterisation of solids – Sampling of solid and semi–solid materials – Part 1: Guidance for the segmental sampling of stockpiles of unknown composite	B, FG, GE, HI, PI
DIN 19698–2 2016–12	Characterisation of solids – Sampling of solid and semi–solid materials – Part 2: Guidance for taking samples of stockpiles for integral characterisation	GE
DIN 51750–1 1990–12	Sampling of petroleum products; general information (Modification: <i>Matrix here biowaste</i>)	GE, PI
DIN 51750–2 1990–12	Sampling of liquid petroleum products (Modification: <i>Matrix here biowaste</i>)	GE, PI
LAGA PN 98 2001	Guideline on procedures for physical, chemical and biological examination in connection with the recycling/disposal of waste	B, FG, GE, HI, PI
SenUVK Berlin 2009–11	Guidance on sampling and analysis of mineral waste in building construction and civil engineering (Runder Tisch Abfallbeprobung Brandenburg–Berlin)	B

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 5 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

2.2 Sample pretreatment

DIN EN ISO 15587-2 (A 32) 2002-07	Water quality – Digestion for the determination of elements in water – Part 2: Nitric acid digestion	HI, PI
DIN EN ISO 6468 (F 1) 1997-02	Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction (Modification: <i>Matrix here eluates; Additionally PCB 118, measurement with GC-MSD or GC-MS/MS, extraction only</i>)	FG
DIN 38407-F 3 1998-07	Gas chromatographic determination of polychlorinated biphenyls (Restriction: <i>FG: Extraction only</i>)	FG
DIN 38407-F 39 2011-09	Water quality – Determination of selected polycyclic aromatic hydrocarbons (PAH) – Method using gas chromatography with mass spectrometric detection (GC-MS) (Restriction: <i>Extraction only</i>)	FG
DIN ISO 28540 (F 40) 2014-05	Water quality – Determination of 16 polycyclic aromatic hydrocarbons (PAH) in water – Method using gas chromatography with mass spectrometric detection (Restriction: <i>Extraction only</i>)	FG
DIN 38414-S 4 1984-10	Determination of leachability with water	B, FG, GE, HI, PI
DIN EN 13346 (S 7a) 2001-04	Characterisation of sludges – Determination of trace elements and phosphorus – Aqua regia extraction methods (Restriction: <i>Only method A (extraction method under reflux conditions) and method C (extraction method in a closed vessel in a microwave oven)</i>)	HI, PI
DIN EN 932-2 1999-03	Test for general properties of aggregates – Part 2: Methods for reducing laboratory samples (Restriction: <i>FG, HI: Only reduction by quartering</i>)	FG, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 6 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN 1744-3 2002-11	Tests for chemical properties of aggregates – Part 3: Preparation of eluates by leaching of aggregates (Restriction: <i>Matrix only waste</i>)	FG, GE, HI, PI
DIN ISO 11277 2002-08	Soil quality – Determination of particle size distribution in mineral soil material – Method by sieving and sedimentation	PI
DIN ISO 11464 2006-12	Soil quality – Pretreatment of samples for physico- chemical analysis	B, FG, GE, HI, PI
DIN ISO 11466 1997-06	Soil quality – Extraction of trace elements soluble in aqua regia (Modification: <i>Matrix here also waste</i>)	HI, PI
DIN ISO 14255 1998-11	Soil quality – Determination of nitrate nitrogen, ammonium nitrogen and total soluble nitrogen in air-dry soils using calcium chloride solution as extractant (Restriction: <i>Here only extraction</i>)	PI
DIN ISO 14507 2004-07	Soil quality – Pretreatment of samples for determination of organic contaminants in soils	FG, GE, HI, PI
DIN ISO 14869-2 2003-01	Soil quality – Dissolution for the determination of total element content – Part 2: Dissolution by alkaline fusion (Modification: <i>Matrix here also waste</i>)	FG
DIN ISO 19730 2009-07	Soil quality – Extraction of trace elements using ammonium nitrate solution	HI, PI
DIN EN ISO 16720 2007-06	Soil quality – Pretreatment of samples by freeze-drying for subsequent analysis	PI
DIN EN 12457-1 2003-01	Characterisation of waste – Leaching; Compliance test for leaching of granular waste materials and sludges – Part 1: One stage batch test at a liquid to solid ratio of 2 l/kg with particle size below 4 mm (without or with size reduction)	B, FG, GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 7 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN 12457-2 2003-01	Characterisation of waste – Leaching; Compliance test for leaching of granular waste materials and sludges – Part 2: One stage batch test at a liquid to solid ratio of 10 l/kg with particle size below 4 mm (without or with size reduction)	B, FG, GE, HI, PI
DIN EN 12457-3 2003-01	Characterisation of waste – Leaching of granular waste and sludges – Part 3: Two stage batch test at a liquid to solid ratio of 2 l/kg and 8 l/kg for materials with high solid content with particle size below 4 mm (without or with size reduction)	FG, GE, HI, PI
DIN EN 12457-4 2003-01	Characterisation of waste – Leaching; Compliance test for leaching of granular waste materials and sludges – Part 4: One stage batch test at a liquid to solid ratio of 10 l/kg for materials with particle size below 10 mm (without or with size reduction) (Modification PI: <i>Here also dust matrix</i>)	B, FG, GE, HI, PI
DIN EN 13657 2003-01	Characterisation of waste – Digestion for subsequent determination of aqua regia soluble portion of elements in waste (Modification PI: <i>Here also dust matrix</i>)	HI, PI
DIN EN 15002 2015-07	Characterisation of waste – Preparation of test portions from the laboratory sample	GE, PI
DIN EN 16173 2012-11	Sludge, treated biowaste and soil – Digestion of nitric acid soluble fractions of elements (Restriction: <i>Matrix only soil</i>)	PI
DIN EN 16174 2012-11	Sludge, treated biowaste and soil – Digestion of aqua regia soluble fractions of elements	HI, PI
DIN EN 16179 2012-11	Sludge, treated biowaste and soil – Guidance for sample pretreatment	GE, HI, PI
DIN 19527 2012-08	Leaching of solid materials – Batch test for the examination of the leaching behaviour of organic substances at a liquid to solid ratio of 2 l/kg (Restriction: <i>Matrix only soil</i>)	GE, HI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 8 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN 19528 2009–01	Leaching of solid materials – Percolation method for the joint examination of the leaching behaviour of inorganic and organic substances	FG, GE, HI
DIN 19529 2015–12	Leaching of solid materials – Batch test for the examination of the leaching behaviour of inorganic and organic substances at a liquid to solid ratio of 2 l/kg	FG, GE, HI, PI
DIN V 19736 1998–10	Soil quality – Derivation of concentrations of organic pollutants in soil water	HI
DIN 19747 2009–07	Investigation of solids – Pretreatment, preparation and processing of samples for chemical, biological and physical investigations	B, FG, GE, HI, PI
DIN EN ISO 54321 2021–04	Soil, treated biowaste, sludge and waste – Digestion of aqua regia soluble fractions of elements	HI, PI
VDLUFA Methodenbuch I A 6.2.1.1 1991	Determination of phosphorus and potassium in the calcium acetate lactate (CAL) extract (Restriction: <i>Here only extraction</i>)	PI
VDLUFA Methodenbuch I A 6.2.4.1 1991	Extract with calcium chloride (CaCl ₂) for the determination of plant available magnesium	PI
AltholzV Annex IV No. 1.2 2002	Sampling and sample preparation – Sample preparation	HI
AltholzV Annex IV No. 1.3 2002	Sample preparation: Homogenisation, drying and crushing < 2 mm (Restriction <i>FG: Homogenisation only</i>)	FG, GE, HI
BioAbfV Annex 3 No. 1.2 1998	Sample preparation and partial sampling, sieving < 10 mm, crushing < 0.25 mm	GE, HI, PI
BBodSchV Annex 1, 3.1.2 1999–07	Leaching methods – Soil saturation extract	HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 9 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DepV Annex 4 No. 3.1.1 2009 / 2017	Sample preparation: Reduction, crushing and grinding of solid samples for laboratory sample	FG, GE, HI, PI
DepV Annex 4 No. 3.1.1 2009 / 2017	Sample preparation: Reduction and milling of pasty and sludgy samples for laboratory sample	GE
LUA NRW Data Sheet 20 2000–03	Recommendations for the implementation and evaluation of column tests in accordance with the Federal Soil Protection and Contaminated Sites Ordinance (BBodSchV)	HI
LAGA EW 77 1977	Guideline on procedures for physical and chemical examination in connection with the disposal of waste; determination of leachability of solid and sludgy waste with water	FG, GE, PI
LAGA EW 98 2002 / 2012 / 2017	Guideline on procedures for the physical and chemical examination of waste, contaminated soils and materials from brownfields: Preparation and analysis of aqueous eluates (Restriction: <i>Matrix here also soil</i>)	FG, GE, HI, PI
LAGA EW 98 S 2002	Determination of leachability with water in batch test	FG, GE, HI, PI
LAGA EW 98 p 2002 / 2012 / 2017	Determination of leachability with water at constant pH (pH–stat method) (Restriction: <i>Matrix here soil</i>)	FG
LAGA EW 98 T 2012–11	Determination of leachability with water in trough test	FG, GE, HI, PI
AbfKlärV, Annex 2 No. 1.2 2017	Sample preparation: Drying and homogenisation	PI
FGSV–No. 642 2001	Guidelines for the environmentally friendly use of industrial by–products and recycled building materials in road construction (RuA–StB 01)	GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 10 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

2.3 Atomic- and mass spectrometry of elements

2.3.1 Atomic absorption spectrometry (K-AAS) of mercury (*: PI)

DIN EN ISO 12846 (E 12) 2012-08	Water quality – Determination of mercury – Method using atomic absorption spectrometry (AAS) with and without enrichment (Modification PI: <i>Without enrichment; here also waste wood matrix after microwave digestion with aqua regia or nitric acid</i>)	PI, SV
DIN ISO 16772 2005-06	Soil quality – Determination of mercury in aqua regia soil extracts with cold-vapour atomic spectrometry or cold-vapour atomic fluorescence spectrometry (Modification: <i>Soil, sewage sludge, sludge matrix</i>)	PI
DIN EN 16175-1 2016-12	Sludge, treated biowaste and soil – Determination of mercury – Part 1: Cold-vapour atomic absorption spectrometry (CV-AAS)	PI
ASTM D6722 2011	Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by Direct Combustion Analysis (Modification: <i>SV: Additionally power plant water matrix, HE: Water samples containing halogens</i>)	HE, SV

2.3.2 By inductively coupled plasma atomic emission spectrometry (ICP-OES) (*: PI)

DIN EN ISO 11885 (E 22) 2009-09	Water quality – Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES)	PI
DIN ISO 22036 2009-06	Soil quality – Determination of trace elements in extracts of soil by inductively coupled plasma atomic emission spectrometry (ICP-AES) (Modification: <i>Matrix here also biowaste, dust</i>)	PI
DIN EN 16170 2017-01	Sludge, treated biowaste and soil – Determination of elements using inductively coupled plasma optical emission spectrometry (ICP-OES)	PI
LAGA SM 2/79 1983-12	Determination of heavy metals in solid and sludgy wastes	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

2.3.3 By inductively coupled plasma mass spectrometry (ICP–MS) (*: PI,)

DIN EN ISO 17294–2 (E 29) 2017–01	Water quality – Application of inductively coupled plasma mass spectrometry (ICP–MS) – Part 2: Determination of selected elements including uranium isotopes	PI
DIN EN 16171 (S 32) 2017–01	Sludge, treated biowaste and soil – Determination of elements using inductively coupled plasma mass spectrometry (ICP–MS) (Modification: <i>Matrix here also biowaste, dust</i>)	PI

2.4 Biological activity

DEV H 22 1960	Determination of putrefactiveness	GE, PI
DIN 38414–S 8 1985–06	Determination of the amenability to anaerobic digestion	GE
BGK Methodenbuch zur Analyse Section IV, A 1 2006–09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Degree of decomposition in self–heating test (Restriction: <i>Matrix only soil</i>)	GE
BGK Methodenbuch zur Analyse Section IV, A 3 2006–09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Plant tolerance in seed planting test with spring barley (Restriction: <i>Matrix only soil</i>)	GE
BGK Methodenbuch zur Analyse Section IV, A 4 2006–09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Gaseous phytotoxins in seed planting test with cress (Restriction: <i>Matrix only biowaste</i>)	GE
BGK Methodenbuch zur Analyse Section IV, A 5 2006–09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Stability of the nitrogen balance of organic materials (Modification: <i>Measurement of ammonium with CFA and measurement of nitrate with IC; matrix only soil</i>)	GE

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

BGK Methodenbuch zur Analyse Section IV, B 1 2006–09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Content of viable seeds and parts of plants capable of producing shoots (Restriction: <i>Matrix only biowaste</i>)	GE
DepV Annex 4 No. 3.3.1 2009 / 2017	Breathability, determined over 4 days in laboratory test (AT ₄)	GE
DepV Annex 4 No. 3.3.2 2009 / 2017	Breathability, determined over 21 days in laboratory test (GB ₂₁)	GE
VDI 4630 2016–11	Fermentation of organic materials – Characterization of the substrate, sampling, collection of material data, fermentation tests	GE

2.5 Electrode measurement of physical and physico-chemical parameters and of summary indices of actions and substances (*: PI)

DIN EN ISO 10523 (C 5) 2012–04	Water quality – Determination of pH	B, FG, GE, HI, PI, SV, S
DIN 38404–C 6 1984–05 Corrigendum 1 2018–12	Determination of the oxidation reduction (redox) potential	B, FG, GE, HI, PI
DIN EN 27888–C 8 1993–11	Water quality; Determination of electrical conductivity	B, FG, GE, HI, PI, SV, S
DIN 38405–D 4 Section 2 1985–07	Determination of fluoride (Restriction: <i>here only section 2 (DIN 38405–D 4–1): Direct determination of fluoride by fluoride ion-selective electrode</i>)	FG, HE
DIN EN ISO 5814 (G 22) 2013–02	Water quality – Determination of dissolved oxygen – Electrochemical probe method	B, FG, GE, HI, PI, S
DIN 38408–G 23 1987–11	Oxygen saturation index	FG, PI
DIN EN 12176 (S 5) 1998–06	Characterisation of sludge – Determination of pH (H ₂ O)	FG, GE, HE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 13 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN 15933 (S 5) 2012-11	Sludge, treated biowaste and soil – Determination of pH	FG, GE, HI, PI
DIN ISO 10390 2005-12	Soil quality – Determination of pH (Modification PI: <i>Matrix here also dust</i>)	FG, GE, HI, PI
DIN ISO 11265 1997-06	Soil quality – Determination of specific electrical conductivity	FG, GE, HI, PI
DIN CEN/TS 15937 DIN SPEC 91202 2013-08	Sludge, treated biowaste and soil – Determination of specific electrical conductivity (Restriction: <i>Matrix only soil</i>)	GE, PI
PI-MA-M 07-031 2012-05	Oxygen consumption in sediments as specified by the BfG	PI

2.6 Elemental analysis of elements and of summary indices of actions and substances (*: PI,)

DIN 38414-S 17 2017-01	Determination of the organically bound halogens amenable to extraction (EOX) (Restriction GE: <i>Matrix only soil and sludge</i>)	GE, PI
DIN 38414-S 17 2017-01	Determination of the organically bound halogens amenable to extraction (EOX) (Modification: Extraction with cyclohexane, n-hexane and acetone by ultrasonic shaking method)	PI
DIN EN 13137 (S 30) 2001-12	Characterisation of waste – Determination of total organic carbon (TOC) in waste, sludges and sediments	GE, PI
DIN ISO 10694 1996-08	Soil quality – Determination of organic carbon and total carbon after dry combustion (elemental analysis)	GE, PI
DIN ISO 13878 1998-11	Soil quality – Determination of total nitrogen content after dry combustion (elemental analysis) (Modification: <i>Additionally carbon, hydrogen, sulphur, oxygen</i>)	GE
DIN ISO 15178 2001-02	Soil quality – Determination of total sulphur content after dry combustion (elemental analysis)	GE

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 14 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN 14582 2016–12	Characterisation of waste – Halogen and sulphur content– Oxygen combustion in closed systems and determination methods	HE
DIN EN 15936 2012–11	Sludge, treated biowaste, soil and waste – Determination of total organic carbon (TOC) by dry combustion (Restriction: <i>Matrix only soil</i>)	GE, PI
DIN EN 17505 2020–05 Draft	Soil and waste characterization – Temperature dependent differentiation of total carbon (TOC400, ROC, TIC900)	GE, PI
DIN 19539 2016–12	Investigation of solids – Temperature–dependent differentiation of total carbon (TOC400, ROC, TIC900)	GE, PI
VGB–B 401 Blatt 4.4.2.1 1993–01	Determination of organic carbon in waste incineration slags taking into account the coke carbon content (Restriction: <i>Matrix here waste and soil</i>)	GE

2.7 Liquid chromatography of organic compounds

2.7.1 With conventional detectors (HPLC–DAD)

PI–MA–M 02–002 2022–03	Determination of aldehydes in water, solids and on air cartridges / silica gel / passive collectors enriched samples by HPLC–DAD	PI
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2.7.2 With mass selective detectors (LC–MS/MS) (: PI)**

DIN EN ISO 22478 (F 21) 2006–07	Water quality – Determination of certain explosives and related compounds – Method using HPLC with UV detection (Modification: <i>Matrix here eluates; MS/MS detection and processing by SPE or analysis by direct injection</i>)	PI
DIN 38407–F 36 2014–09	Determination of selected active substances of plant protection products and other organic substances in water – Method using high performance liquid chromatography and mass spectrometric detection (HPLC–MS/MS or –HRMS) after direct injection (Modification: <i>Matrix here eluates</i>)	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN 38407–F 42 2011–03	Determination of selected polyfluorinated compounds (PFC) in water – Method using high performance liquid chromatography and mass spectrometric detection (HPLC/MS–MS) after solid–liquid extraction (Modification: <i>Matrix here eluates</i>)	PI
DIN ISO 16308 (F 45) 2017–09	Water quality – Determination of glyphosate and AMPA – Method using high performance liquid chromatography (HPLC) with tandem mass spectrometric detection (Modification: <i>Matrix here eluates; additionally glufosinate</i>)	PI
DIN 38407–F 47 2017–07	Determination of selected active pharmaceutical ingredients and other organic substances in water and waste water – Method using high performance liquid chromatography and mass spectrometric detection (HPLC–MS/MS or HRMS) after direct injection (Modification: <i>Matrix here eluates; only measurement by HPLC–MS/MS</i>)	PI
DIN 38413–P 6 2007–02	Determination of acrylamide – Method using high performance liquid chromatography with mass spectrometric detection (HPLC–MS/MS) (Modification: <i>Matrix here eluates</i>)	PI
DIN 38414–S 14 2011–08	Determination of selected polyfluorinated compounds (PFC) in sludge, compost and soil – Method using high performance liquid chromatography and mass spectrometric detection (HPLC–MS/MS)	PI
DIN ISO 11916–1 2014–11	Soil quality – Determination of selected explosives – Part 1: Method using high–performance liquid chromatography (HPLC) with UV detection (Modification: <i>MS/MS detection and processing by SPE or analysis by direct injection</i>)	PI
DIN EN ISO 21676 2022–01	Water quality – Determination of the dissolved fraction of selected active pharmaceutical ingredients, transformation products and other organic substances in water and treated waste water – Method using high performance liquid chromatography and mass spectrometric detection (HPLC–MS/MS or –HRMS) after direct injection (Modification: <i>Matrix here eluates; Restriction: Only measurement by HPLC–MS/MS</i>)	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 16 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

PI-MA-M 02-007 2022-03	Determination of active pharmaceutical ingredients and other organic compounds in water and soil by LC-MS/MS	PI
PI-MA-M 02-008 2019-09	Determination of benzotriazoles in water by LC-MS/MS	PI
PI-MA-M 02-019 2022-03	Determination of selected heterocycles by HPLC-MS/MS in water and soil	PI
PI-MA-M 02-024 2022-03	Determination of selected active substances of plant protection products by LC-MS/MS in water and soil	PI
PI-MA-M 02-027 2022-03	Determination of polar nitrogen compounds in soil and water by LC-MS/MS	PI
PI-MA-M 02-031 2022-03	Determination of X-ray contrast media in water by HPLC-MS/MS	PI
PI-MA-M 02-036 2022-03	Determination of tetracyclines in water by LC-MS/MS	PI
PI-MA-M 02-038 2022-03	Determination of trifluoroacetic acid and sulphamic acid in water by LC-MS/MS	PI

2.8 Gas chromatography of organic compounds

2.8.1 With conventional detectors (GC-FID, GC-ECD) (*: PI)

DIN 38407-F 3 1998-07	Gas chromatographic determination of polychlorinated biphenyls	GE
DIN EN ISO 10301 (F 4) 1997-08	Water quality – Determination of highly volatile halogenated hydrocarbons – Gas-chromatographic methods (Modification: <i>Here matrices waste, soil, sewage sludge, sludge, sediment</i>)	GE
DIN EN ISO 9377-2 (H 53) 2001-07	Water quality – Determination of hydrocarbon oil index – Part 2: Method using solvent extraction and gas chromatography (Modification: <i>PI: Additional analysis after Petrol Pack</i>)	GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 17 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN 38414–S 20 1996–01	Determination of 6 polychlorinated biphenyls (PCB) (Modification: <i>Drying at 105 °C, 3 h Soxhlet extraction, implementation in conjunction with LUA Data Sheet 6 (1996)</i>)	GE
DIN EN 17322–S 34 2021–03	Environmental solid matrices – Determination of polychlorinated biphenyls (PCB) by gas chromatography–mass selective detection (GC–MS) or electron–capture detection (GC–ECD)	GE, HI
DIN ISO 10382 2003–05	Soil quality – Determination of organochlorine pesticides and polychlorinated biphenyls – Gas chromatographic method with electron capture detection	GE
DIN EN ISO 16703 2011–09	Soil quality – Determination of content of hydrocarbon in the range C ₁₀ to C ₄₀ (Modification: <i>PI: Additional analysis after Petrol Pack</i>)	GE, HI, PI
DIN EN ISO 22155 2016–07	Soil quality – Gas chromatographic determination of volatile aromatic and halogenated hydrocarbons and selected ethers – Static headspace method	GE
DIN EN 14039 2005–01	Characterisation of waste – Determination of hydrocarbon content in the range of C ₁₀ to C ₄₀ by gas chromatography (Modification: <i>Matrix here also soil</i>)	GE, HI, PI
DIN EN 15308 2016–12	Characterisation of waste – Determination of selected polychlorinated biphenyls (PCB) in solid waste by gas chromatography with electron capture or mass spectrometric detection	GE
DIN EN 16167 2019–06	Soil, treated biowaste and sludge – Determination of polychlorinated biphenyls (PCB) by gas chromatography with mass selective detection (GC–MS) and gas chromatography with electron–capture detection (GC–ECD)	GE
DIN CLC/TS 50625–3–4 2018–07 VDE V 0042–13–34 2018–07	Collection, logistics & treatment requirements for WEEE – Part 3–4: Specification for de–pollution – Temperature exchange equipment (Restriction: <i>Analysis only according to Annex CC.2 method 1, Annex CC.3 method 2 and Annex EE.3 method 2</i>)	GE
AltholzV Annex IV No. 1.4.5 2002	Determination of polychlorinated biphenyls (PCB)	GE

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 18 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

LUA NRW Data Sheet 6 1996	Determination of 6 polychlorinated biphenyls (PCB) in soils, sludges, sediments and wastes (Restriction: <i>Matrix only soil</i>)	GE
LAGA KW/04 2019-09	Determination of the content of hydrocarbons in waste – Examination and analysis strategy (hydrocarbons in waste using GC-FID)	GE, HI, PI
HI-MA-M 03-019 # 2021-10	Volatile alkanes C1 to C4 in water with HS-FID	HI

2.8.2 With mass selective detectors (GC-MS; GC-MS/MS) (*: PI)

DIN EN ISO 6468 (F 1) 1997-02	Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction (Modification: <i>Here eluates matrix; additional PCB 118, measurement with GC-MSD or GC-MS/MS</i>)	PI
DIN 38407-F 2 1993-02	Determination of low volatile halogenated hydrocarbons by gas chromatography (Modification GE: <i>In combination with DIN 51527 T 1; PCB only</i>)	GE, PI
DIN 38407-F 3 1998-07	Gas chromatographic determination of polychlorinated biphenyls	GE, PI
DIN EN ISO 10301 (F 4) 1997-08	Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods or GC-MSD (Modification: <i>Matrices eluates from waste, soil, sewage sludge, sludge, sediment</i>)	GE, HI, PI
DIN 38407-F 9-1 1991-05	Determination of benzene and some of its derivatives (Modification: <i>Matrix here eluates from waste and soil; analysis by GC-MSD; PI: Additionally aliphatics C5-C10, diethylbenzenes; elutriation with water</i>)	GE, HI, PI
DIN EN ISO 17353 (F 13) 2005-11	Water quality – Determination of selected organotin compounds – Gas chromatographic method	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 19 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN 12673 (F 15) 1999-05	Water quality – Gas chromatographic determination of some selected chlorophenols in water (Modification: <i>Additional analytes triclosan and bisphenol-A; matrix here eluates, soil, dusts and sediment</i>)	PI
DIN 38407-F 17 1999-02	Determination of selected nitroaromatic compounds by gas chromatography (GC-MSD)	PI
DIN EN ISO 18856 (F 26) 2005-11	Water quality – Determination of selected phthalates using gas chromatography/mass spectrometry liquid-liquid-extraction (Modification: <i>Matrix here eluates</i>)	PI
DIN 38407-F 27 2012-10	Determination of selected phenols in groundwater and seepage water, aqueous eluates and percolates	PI
DIN EN ISO 22032 (F 28) 2009-07	Water quality – Determination of selected polybrominated diphenyl ethers in sediment and sewage sludge – Method using extraction and gas chromatography/mass spectrometry (Modification: <i>Other analytes polybrominated biphenyls (PBB), tetrabromobisphenol A (TBBP A), hexabromocyclododecane (HBCD), tribromanisole (TBA); ultrasonic extraction; other internal standards; matrices wood waste, soil, sewage sludge, sludge, sediment, dusts</i>)	PI
DIN EN ISO 18857-1 (F 31) 2007-02	Water quality – Determination of selected alkylphenols – Part 1: Method for non-filtered samples using liquid-liquid extraction and gas chromatography with mass selective detection (Modification: <i>Additional determination of octylphenols and ethoxylates; extraction with hexane and different clean-up</i>)	PI
DIN EN ISO 18857-2 (F 32) 2012-01	Water quality – Determination of selected alkylphenols – Part 2: Gas chromatographic-mass spectrometric determination of alkylphenols, their ethoxylates and bisphenol A in non-filtered samples following solid-phase extraction and derivatisation (Modification: <i>Here only for alkylphenols and their ethoxylates; only for measurement, other internal standards, additionally analytes: OP3EO and NP3EO; matrices soil and sediment</i>)	PI
DEV-F 33 2002	Determination of polychlorinated dibenzodioxins (PCDD) and polychlorinated dibenzofurans (PCDF)	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 20 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN 38407–F 37 2013–11	Determination of organochlorine pesticides, polychlorinated biphenyls and chlorobenzene in water – Method using gas chromatography and mass spectrometric detection (GC–MS) after liquid–liquid extraction (Modification: <i>Measurement also with GC–MS/MS; additional analysis of cypermethrin, permethrin, cyhalothrin and deltamethrin; matrix here eluates</i>)	PI
DIN 38407–F 39 2011–09	Water quality – Determination of selected polycyclic aromatic hydrocarbons (PAH) – Method using gas chromatography with mass spectrometric detection (GC–MS)	GE, PI
DIN ISO 28540 (F 40) 2014–05	Water quality – Determination of 16 polycyclic aromatic hydrocarbons (PAH) in water – Method using gas chromatography with mass spectrometric detection	GE, PI
DIN 38407–F 43 2014–10	Determination of selected easily volatile organic compounds in water – Method using gas chromatography and mass spectrometry by static headspace technique (HS–GC–MS) (Modification: <i>Matrix here eluates</i>)	GE, HI, PI
DIN EN ISO 12010 (H 47) 2019–09	Water quality – Determination of short–chain polychlorinated alkanes (SCCPs) in water – Method using gas chromatography–mass spectrometry (GC–MS) and negative–ion chemical ionisation (NCI) (Modification: <i>Additional determination of MCCP, modular clean–up, modified quantification, detector GC–MSD, matrix here eluates</i>)	PI
DIN EN ISO 18635 (H 48) 2016–10	Water quality – Determination of short–chain polychlorinated alkanes (SCCPs) in sediment, sewage sludge and suspended (particulate) matter – Method using gas chromatography mass spectrometry (GC–MS) and electron capture negative ionization (ECNI) (Modification: <i>Additionally MCCP, matrices soil, sewage sludge, sludge, sediment</i>)	PI
DIN 38413–P 2 1988–05	Determination of vinyl chloride (chloroethene) by headspace gas chromatography (Modification: <i>Matrix here soil eluates</i>)	HI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 21 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN ISO 16588 (P 10) 2004-02	Water quality – Determination of six complexing agents, EDTA, NTA, etc. – Gas chromatographic method (GC-MSD) (Modification: <i>Matrix here soil after aqueous eluate preparation</i>)	PI
DIN 38414- 20 1996-01	Determination of 6 polychlorinated biphenyls (PCB) (Modification: <i>PI: Sediments are freeze-dried and extracted for 8 h as per Soxhlet, measurement using GC-MS; GE: Drying at 105 °C, 3 h Soxhlet extraction, implementation in conjunction with LUA Data Sheet 6 (1996), matrix here also waste</i>)	GE, HI, PI
DIN 38414-S 24 2000-10	Determination of polychlorinated dibenzodioxins (PCDD) and polychlorinated dibenzofurans (PCDF)	PI
DIN EN 17322-S 34 2021-03	Environmental solid matrices – Determination of polychlorinated biphenyls (PCB) by gas chromatography-mass selective detection (GC-MS) or electron-capture detection (GC-ECD)	GE, HI, PI
E DIN EN 17503-S 36 2020-06	Environmental solid matrices – Determination of polycyclic aromatic hydrocarbons (PAH) by gas chromatography (GC) and high performance liquid chromatography (HPLC)	GE, HI
ISO 8165-2 1999-07	Water quality – Determination of selected phenols – Part 2: Method by derivatisation and gas chromatography – Analysis using GC-MSD (Modification: <i>Matrix here eluates</i>)	PI
ISO 17858 2007-02	Water quality – Determination of dioxin-like polychlorinated biphenyls – Method using gas chromatography / mass spectrometry (Modification: <i>Measurement with Triple Quad after Soxhlet extraction in accordance with DIN 38414-24 (2000-10); matrices soil, sewage sludge, sludge, sediment</i>)	PI
DIN ISO 10382 2003-05	Soil quality – Determination of organochlorine pesticides and polychlorinated biphenyls – Gas chromatographic method with electron capture detection (Modification: <i>Matrices soil, sewage sludge, sludge, sediment; measurement using mass selective detectors; PI, HI: Processing from freeze-dried sample with Soxhlet extraction; GE: Processing with ultrasonic extraction and clean-up with silica gel (in accordance with DIN 38407-F 3)</i>)	GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 22 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN ISO 11916-2 2014-11	Soil quality – Determination of selected explosives – Part 2: PI Method using gas chromatography (GC) and electron capture detection (ECD) or mass spectrometric detection (MS)	
DIN ISO 14154 2005-12	Soil quality – Determination of selected chlorophenols – PI Gas chromatographic method with electron capture (Modification: <i>Determination using GC-MS</i>)	
DIN ISO 18287 2006-05	Soil quality – Determination of polycyclic aromatic hydrocarbons (PAH) – Gas chromatographic method with mass spectrometric detection (GC-MS) (Modification: <i>Different solvent mixture</i>)	GE, HI, PI
DIN EN ISO 22155 2016-07	Soil quality – Gas chromatographic determination of volatile aromatic and halogenated hydrocarbons and selected ethers – Static headspace method	GE, HI, PI
DIN EN ISO 23161 2019-04	Soil quality – Determination of selected organotin compounds – Gas chromatographic method	PI
DIN EN 15308 2008-05	Characterisation of waste – Determination of selected polychlorinated biphenyls (PCB) in solid waste by using capillary gas chromatography with electron capture or mass spectrometric detection	GE, HI, PI
DIN EN 15308 2016-12	Characterisation of waste – Determination of selected polychlorinated biphenyls (PCB) in solid waste by gas chromatography with electron capture or mass spectrometric detection	GE, HI, PI
DIN EN 16167 2019-06	Soil, treated biowaste and sludge – Determination of polychlorinated biphenyls (PCB) by gas chromatography with mass selective detection (GC-MS) and gas chromatography with electron-capture detection (GC- ECD)	GE, HI, PI
DIN EN 12766 3 2005 02 Corrigendum 1 2007 06	Petroleum products and used oils – Determination of PCBs PI and related products – Part 3: Determination and quantification of polychlorinated terphenyls (PCT) and polychlorinated benzyl toluenes (PCBT) content by gas chromatography (GC) using an electron capture detector (ECD) (Modification: <i>Matrix soil and eluates; measurement using GC-MS, ultrasonic extraction</i>)	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 23 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN 15527 2008–09	Characterisation of waste – Determination of polycyclic aromatic hydrocarbons (PAHs) in waste using gas chromatography mass spectrometry (GC–MSD) (Modification: <i>Different solvent mixture; matrix here also soil and sludge</i>)	GE, HI, PI
DIN EN 16181 2019–08	Soil, treated biowaste and sludge – Determination of polycyclic aromatic hydrocarbons (PAH) by gas chromatography (GC) and high performance liquid chromatography (HPLC) (Restriction: <i>Measurement only by GC</i>)	GE, HI, PI
DIN EN 16733 2013–12	Characterisation of waste – Determination of brominated flame retardant (BFR) in solid waste	PI
DIN CEN/TS 16182; DIN SPEC 91262 2012–05	Sludge, treated biowaste and soil – Determination of nonylphenols (NP) and nonylphenol–mono and diethoxylates by gas chromatography with mass selective detection (GC–MS)	PI
DIN CEN/TS 16183; DIN SPEC 91265 2012–05	Sludge, treated biowaste and soil – Determination of selected phthalates using GC–MS (Restriction: <i>Matrix here also waste</i>)	PI
DIN 19742 2014–08	Soil quality – Determination of selected phthalates in sludge, sediment, solid waste and soil after extraction and determination using gas chromatography mass spectrometry (GC–MS) (Modification: <i>Additionally analytes dimethyl, diethyl, dipropyl, diisobutyl, dipentyl, benzyl butyl, dicyclohexyl, dioctyl, diisononyl, diisodecyl phthalate; matrix here also waste</i>)	PI
AltholzV Annex IV No. 1.4.4 2002	Determination of selected chlorophenols (chlorophenols, PCP, phenols, cresols, xlenols) (Modification: <i>Measurement with GC–MSD; additionally analytes triclosan and bisphenol A.</i>)	PI
AltholzV Annex IV No. 1.4.5 2002	Determination of polychlorinated biphenyls (PCB) (Modification PI: <i>Measurement with GC–MSD</i>)	GE, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 24 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

E DIN 3599 2021-01	Solid – GC–MS–Screening – Qualitative and semi– quantitative analysis (Modification: <i>PI: Quantification using nearest internal standard, only low volatile compounds, no identification according to identification class A+ and A++;</i> <i>GE: Matrix here also soil, only low volatile compounds, no identification according to identification class A+ and A++;</i> <i>PI:)</i>	GE, PI
EPA Method 522 Version 1.0 2008-09	Determination of 1,4–Dioxane in Drinking Water by Solid Phase Extraction (SPE) and Gas Chromatography Mass Spectrometry (GC/MS) with Selected Ion Monitoring (SIM) (Modification: <i>Eluates matrix</i>)	GE
LUA NRW Data Sheet 1 1994	PAH: 16 polycyclic aromatic hydrocarbons in accordance with EPA/TVO including methylnaphthaline <i>PI: Including benzo[e]pyrene using GC–MSD; reconditioning of sludge, sediment from freeze–dried sample</i>	GE, HI, PI
LUA NRW Data Sheet 6 1996	Determination of 6 polychlorinated biphenyls (PCB) in soils, sludges, sediments and wastes (Restriction: <i>Matrix only soil</i>)	GE
HLUG, Handbuch Altlasten Volume 7, Part 4 2000	VOC/VOC: Benzene and some of its derivatives using GC– MS after overcoating with methanol (Modification: <i>Matrix only soil</i>)	GE, HI
HLUG, Handbuch Altlasten Volume 7, Part 5, 2004	Nitro aromatic compounds using GC–MSD (Restriction: <i>Matrix only soil</i>)	PI
HI–MA–M 03–022 # U 2021–10	Organic acids (C1 – C5) in water, eluates and sludge after derivatisation by HS–GC–MS	HI
HI–MA–M 03–024 # U 2021–10	Heterocycles in water with GC–MS	HI
PI–MA–M 03–006 2022–03	Screening of water and soil	PI
PI–MA–M 03–077 2022–03	Glycols in water by GC–MSD	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 25 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

PI-MA-M 03-079 2022-03	Organophosphates in various matrices by GC-MS	PI
PI-MA-M 03-081 2022-03	Musk compounds in water and solids (e.g. detergents) by GC-MSD	PI
PI-MA-M 03-086 2022-03	Terpenes in water using GC-MSD	PI
PI-MA-M 03-098 2022-03	Selected heterocyclic compounds by Kora list in waters and eluates by GC-MSD	PI
PI-MA-M 03-106 2022-03	Terpenes in soil using GC-MSD	PI
PI-MA-M 03-112 2022-03	Estrogens, estrogen metabolites and sitosterol in water and soil samples	PI

2.9 Gravimetric analysis of physical, physico-chemical indicators and summary indices of actions and substances (*: PI)

DEV C 9 1974	Determination of density (Modification: <i>Matrix here eluates from waste, soil and dusts</i>)	HE, PI, SV
DIN 38409-H 1 1987-01	Determination of total dry residue, filtrate dry residue and residue on ignition (Modification: <i>Matrix here eluates from waste and soil</i>)	FG, GE, HI, PI
DIN 38409-H 2-2/3 1987-03	Determination of filterable matter and the residue on ignition	GE, HI, PI
DIN EN 872 (H 33) 2005-04	Water quality – Determination of suspended solids – Method by filtration through glass fibre filters	GE, HI, PI
DIN ISO 11349 (H 56) 2015-12	Water quality – Determination of low-volatility lipophilic substances – Gravimetric method	GE, HI, PI
DIN EN 12880 (S 2a) 2001-02	Characterisation of sludges – Determination of dry residue and water content (Modification: <i>Matrix additionally here soil</i>)	FG, GE, HI, PI
DIN 38414-S 3 1985-11	Determination of loss on ignition and residue on ignition of the dry matter of a sludge	FG, GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 26 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN 12879 (S 3a) 2001-02	Characterisation of sludges – Determination of loss on ignition of dry mass	FG, GE, HI, PI
DIN EN 13040 2008-01	Soil improvers and growing media – Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory compacted bulk density	GE
DIN 38414-S 22 2018-10	Determination of dry residue by freezing and preparation of the freeze-dried mass of sludge	PI
DIN EN 15935 (S 33) 2012-11	Sludge, treated biowaste, soil and waste – Determination of loss on ignition	FG, GE, HI, PI
DIN ISO 11465 1996-12	Soil quality – Determination of dry matter and water content on a mass basis – Gravimetric method	B, FG, GE, HI, PI
DIN EN ISO 11272 2017-07	Soil quality – Determination of dry bulk density	GE
DIN EN 13183-1 2002-07 Corrigendum 1 2003-12	Moisture content of a piece of sawn timber – Part 1: Determination by oven dry method	HI, PI
DIN EN 14346 2007-03	Characterisation of waste – Calculation of dry matter by determination of dry residue or water content	B, FG, GE, HI, PI
DIN EN 15169 2007-05	Characterisation of waste – Determination of loss on ignition in waste, sludge and sediments	B, FG, GE, HI, PI
DIN EN 15216 2008-01	Characterisation of waste – Determination of total dissolved solids (TDS) in water and eluates	B, FG, GE, HI, PI
DIN EN 15934 2012-11	Sludge, treated biowaste, soil and waste – Calculation of dry matter fraction after determination of dry residue or water content	B, FG, GE, HI, PI, SV
DIN EN 17828 2016-05	Solid biofuels – Determination of bulk density	HE
DIN 18121-1 1998-04	Soil, investigation and testing – Water content – Part 1: Determination by drying in oven	GE
DIN 18121-2 2020-11	Soil, investigation and testing – Water content – Part 2: Determination by rapid methods	B, FG, GE, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 27 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN 18125–2 2011–03	Soil, investigation and testing – Determination of density of soil – Part 2: Field tests	GE
DIN 18128 2002–12	Soil, investigation and testing – Determination of ignition loss	FG, GE, HI
DIN 19684–2 1977–02	Determination of humus content in soil	GE
DIN 19684–3 2000–08	Methods of soil investigations for agricultural water engineering – Chemical laboratory tests – Part 3: Determination of the loss on ignition and the residue of soil after ignition	FG, GE, HI, PI
DIN 19738 2017–06	Absorption availability of organic and inorganic pollutants from contaminated soil material (Restriction: <i>GE: Only processing and measurement of extracts as described in Annex D of the standard</i>)	GE, HI
DIN 52183 1977–11	Testing of wood; determination of moisture content (Modification: <i>Determination of dry residue</i>)	GE, HI, PI
DIN CEN/TS 15401 2010–09	Solid recovered fuels – Determination of bulk density (Modification: <i>Waste matrix</i>)	FG
LAGA KW/04 Section 6.8 2019–09	Sum of extractable lipophilic substances (Modification: <i>Matrix here also soil</i>)	GE, HI, PI
DepV Annex 4 No. 3.1.12 2009 / 2017	Extractable lipophilic substances	GE, HI, PI
HE–MA M–U 11–7 2013–06	Determination of the solids content > 1 mm from liquid samples (Restriction: <i>Matrix only waste</i>)	HE
HE–MA M–U 11–9 2013–06	Determination of the solids content of liquid and pasty samples (Restriction: <i>Matrix only waste</i>)	HE

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 28 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

**2.10 Determination of physical properties, inorganic and organic compounds by photometry
(PI: *)**

DIN EN ISO 7887 (C 1) 2012-04	Water quality – Examination and determination of colour (Restriction: <i>GE: Method A only</i>)	GE, PI
DIN 38404-C 3 2005-07	Determination of absorption in the range of UV radiation, spectral absorption coefficient	PI
DIN EN ISO 7027-1 (C 21) 2016-11	Water quality – Determination of turbidity – Part 1: Quantitative method	FG, PI
DIN EN ISO 6878 (D 11) 2004-09	Water quality – Determination of phosphorus – Ammonium molybdate photometric method	PI, SV
DIN 38405-D 24 1987-05	Photometric determination of chromium(VI) using 1,5- diphenylcarbonohydrazide (Modification: <i>GE: Also from eluates</i>)	GE
DIN 38405-D 26 1989-04	Photometric determination of dissolved sulphide	GE, PI
DIN 38405-D 27 2017-10	Determination of sulphide by gas extraction	PI
DIN EN ISO 18412 (D 40) 2007-02	Water quality – Determination of chromium(VI) – Photometric method for weakly contaminated water	PI
DIN 38406-E 1 1983-05	Determination of iron	PI
DIN EN ISO 7393-2 (G 4-2) 2019-03	Water quality – Determination of free chlorine and total chlorine – Part 2: Colorimetric method using N,N-dialkyl- 1,4-phenylenediamine, for routine control purposes	FG, PI, S
DIN EN 38409 (H 23) 1980-05	Determination of methylene blues and bismut active substances	GE
DIN ISO 15705 (H 45) 2003-01	Water quality – Determination of the chemical oxygen demand index (ST-COD) – Small-scale sealed tube method	GE, HI, PI
DIN 38413-P 1 1982-03	Determination of hydrazine	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 29 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

ISO 11083 1994-08	Water quality – Determination of chromium(VI) – Spectrometric method with 1.5-diphenylcarbazide	PI
DIN EN 16318 2016-07	Fertilisers and liming materials – Determination of chromium(VI) by photometry (method A) and by ion chromatography with spectrophotometric detection (method B) (Restriction: <i>Only method A</i>)	GE, PI
OENORM ISO 7150-1 1987-12	Water analysis: Determination of ammonium; manual spectrophotometric method	PI
VGB-B 401 Blatt 3.3.1.1 1986-02	Determination of dissolved (molybdate-active) silica	SV
LAGA CN 1/75 1975	Cyanide, total and readily liberated	PI
PI-MA-M 06-101 2016-08	Humic substances in water	PI

2.11 Photometry of anions and phenol index with flow and flow rate analysis (*: PI)

DIN EN ISO 14403-2 (D 3) 2012-10	Water quality – Determination of total cyanide and free cyanide using flow analysis (FIA and CFA) – Part 2: Method using continuous flow analysis (CFA)	GE, PI
DIN EN ISO 13395 (D 28) 1996-12	Water quality – Determination of nitrite nitrogen and nitrate nitrogen and the sum of both by flow analysis (CFA and FIA) and spectrometric detection	PI
DIN EN ISO 15681-2 (D 46) 2019-05	Water quality – Determination of orthophosphate and total phosphorus contents by flow analysis (FIA and CFA) – Part 2: Method using continuous flow analysis (CFA)	PI
DIN EN ISO 11732 (E 23) 2005-05	Water quality – Determination of ammonium nitrogen – Method by flow analysis (CFA and FIA) and spectrometric detection	GE, PI, SV
DIN EN ISO 11905-1 (H 36) 1998-08	Water quality – Determination of nitrogen – Part 1: Method using oxidative digestion with peroxodisulphate	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 30 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN ISO 14402 (H 37) 1999–12	Water quality – Determination of phenol index by flow analysis (FIA and CFA) (Modification: <i>Matrix here eluates from soil and dusts</i>)	GE, PI
DIN ISO 11262 2012–04	Soil quality – Determination of total cyanide	PI
DIN EN ISO 17380 2013–10	Soil quality – Determination of total cyanide and easily liberatable cyanide – Continuous flow analysis method	PI

2.12 Physical parameters

DIN EN ISO 7027 (C 2) 2000–04	Water quality – Determination of turbidity (Restriction: <i>Only on-site-measurements</i>)	FG, GE, PI
DIN 38404–C 4 1976–12	Determination of temperature	B, FG, GE, HI, PI, S
DIN EN ISO 7027–2 (C 22) 2019–06	Water quality – Determination of turbidity – Part 2: Semi-quantitative methods for the assessment of transparency of waters (Restriction: <i>Only field methods as per 5.1</i>)	B, FG, GE, HI, PI
DIN EN ISO 17892–4 2017–04	Geotechnical investigation and testing – Laboratory testing of soil – Part 4: Determination of particle size distribution	GE, PI
DIN EN 13040 2008–01	Soil improvers and growing media – Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory compacted bulk density	GE
DIN EN ISO 2431 2012–03	Paints and varnishes – Determination of flow time by use of flow cups (Restriction: <i>Matrix only waste</i>)	HE
DIN 18123 2011–04	Soil, investigation and testing – Determination of grain-size distribution	PI
BioAbfV Annex 3 No. 1.3.3 1998	Stones and foreign matter (glass, plastics, metals)	GE, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

BGK Methodenbuch zur Analyse Section II, C 1–3 2006–09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Stones and foreign matter (glass, plastics, metals) (Restriction: <i>Matrix only biowaste</i>)	GE, PI
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ASTM D56 2010	Standard Test Method for Flash Point by Tag Closed Cup Tester	HE
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2.13 X–ray fluorescence analysis (XRF) for determination of elements in soil

DIN EN 15309 2007–08	Characterisation of waste and soil – Determination of elemental composition using X–ray fluorescence analysis (Restriction: <i>Loose bulk and pellet only</i>)	HE
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2.14 Titrimetric analysis of physico–chemical indicators, summary indices of actions and substances and anions (*: PI)

DIN EN ISO 9963–1 (C 23) 1996–02	Water quality – Determination of alkalinity – Part 1: Determination of total and composite alkalinity	FG, PI
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DEV D 15 1981	Determination of thiosulfate ion by titrimetry	PI
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DIN 38406–E 5–2 1983–10	Determination of ammonium nitrogen after distillation (Modification: <i>Matrix soil, sewage sludge, sludge, sediment, dusts</i>)	PI
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DIN EN ISO 8467 (H 5) 1995–05	Water quality – Determination of permanganate index	PI
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DIN 38409–H 7 2005–12	Determination of acid and base–neutralising capacities	FG, GE, PI, SV
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DIN EN 25663 (H 11) 1993–11	Water quality – Determination of Kjeldahl nitrogen – Method after digestion with selenium	PI
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DIN 38409–H 28 1992–04	Determination of bound nitrogen; Method after reduction with Devarda’s alloy and catalytic mineralisation	PI
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Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN ISO 11261 1997-05	Soil quality – Determination of total nitrogen – Modified Kjeldahl method (Modification: <i>Matrix soil and additionally biowaste, sediment</i>)	PI
DIN EN 13342 2001-01	Characterisation of sludges – Determination of Kjeldahl nitrogen	PI
DIN EN 16169 2012-11	Sludge, treated biowaste and soil – Determination of Kjeldahl nitrogen (Restriction: <i>Matrix here biowaste, soil and sediment</i>)	PI
DIN EN 16502 2014-11	Test method for the determination of the degree of soil acidity according to Baumann-Gully	PI
DIN CEN/TS 15364 2006-07	Leaching behaviour tests – Acid and base neutralisation capacity test (Restriction: <i>Matrix only waste</i>)	FG
VDLUF A Methodenbuch I A 2.2.1 1991	Determination of total Kjeldahl nitrogen (Modification: <i>Matrix here biowaste</i>)	PI
VDLUF A Methodenbuch II.2 4.5.1 2008	Determination of the alkaline agents in lime, converter lime, lime fertilisers from [...] as well as organic and organic-mineral fertilisers	PI
BGK Methodenbuch zur Analyse Section III, B 2.1 2006-09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Alkaline agents	PI
BGK Methodenbuch zur Analyse Section III, B 2.1 2021-09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Alkaline agents	PI
FG-MA-M 08-002 2021-11	Carbonic acid chemistry KS and KB in soil	FG
Swedish standard SS 28101 1992-04	Nitrogen content of water – Determination with Kjeldahl method after reduction with Devarda's alloy	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 33 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

2.15 Volumetric analysis of carbonates in soil and sediment (*: PI)

DIN ISO 10693 1997-05	Soil quality – Determination of carbonate content – Volumetric method	PI
DIN 18129 2011-07	Soil, investigation and testing – Determination of lime content	GE
DIN 19684-5 1977-02	Determination of carbonate content in soil	PI
VDLUFA Methodenbuch I A 5.3.1 1991	Gas volumetric determination of carbonates	GE, PI
BGK Methodenbuch zur Analyse Section III, B 2.2 2006-09	Method book for the analysis of organic fertilisers, soil improvers and substrates – Scheibler carbonate (gas volumetric) (Restriction: Matrix only soil and sediment)	GE, PI

2.16 Analysis of concrete aggressiveness

DIN 4030-2 2008-6	Assessment of water, soil and gases for their aggressiveness to concrete – Part 2: Sampling and analysis of water and soil samples (Modification: <i>PI: Measurement of acidity in accordance with DIN 16502, measurement of sulphate and chloride by IC, measurement of sulphide photometrically</i> Restriction PI: <i>Without sampling</i>) (Restriction: <i>FG: Sample preparation only</i>)	FG, PI
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2.17 Sensory tests (odour, taste)

DIN EN 1622 (B 3) 2006-10	Water quality – Determination of the threshold odour number (TON) and threshold flavour number (TFN) (Modification: <i>Only odour threshold; here in eluates</i>)	PI
DIN EN 1622 (B 3) 2006-10 (Annex C)	Water quality – Determination of the threshold odour number (TON) and threshold flavour number (TFN), Annex C (Qualitative, simplified method) (Modification: <i>Here in eluates</i>)	FG, GE, HI
DVGW W 273 Data Sheet 2019-05	Guidance on carrying out sensory tests in water laboratories (Modification: <i>Here in eluates</i>)	S

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

2.18 Parameters characterising effects and substances

DIN EN 1484 (H 3) 2019-04	Water analysis – Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon (DOC)	GE, PI, SV
DIN 38409-H 8 1984-09	Determination of extractable organically bonded halogens (Modification: <i>Combustion in an oxygen stream</i>)	GE
DIN EN ISO 9562 (H 14) 2005-02	Water quality – Determination of adsorbable organically bound halogens (AOX)	GE
DIN EN 1485 (H 14) 1996-11	Water quality – Determination of adsorbable organically bound halogens (AOX)	GE
DIN 38409-H 22 2001-02	Determination of dissolved adsorbable and organically bound halogens in salt loaded water after solid-phase enrichment (SPE-AOX)	GE
DIN EN 12260 (H 34) 2003-12	Water quality – Determination of nitrogen – Determination of bound nitrogen (TNb), following oxidation to nitrogen oxides	GE
DIN EN ISO 5815-1 (H 50) 2020-11	Water quality – Determination of biochemical oxygen demand after n days (BOD5) – Part 1: Dilution and seeding method with allylthiourea acid addition	GE
DIN EN 1899-1 (H 51) 1998-05	Water quality – Determination of biochemical oxygen demand after n days (BODn) – Part 1: Dilution and seeding method with allylthiourea acid addition	GE
DIN EN 1899-2 (H 52) 1998-05	Water quality – Determination of biochemical oxygen demand after n days (BODn) – Part 2: Methods for undiluted samples	GE

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 35 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

2.19 Ion chromatography of anions*

DIN EN ISO 10304–1 (D 20) 2009–07	Water quality – Determination of dissolved anions by liquid chromatography of ions – Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulphate <i>(Modification: HE: Measurement in eluate, Wickbold- and bomb digestion; PI: Only matrix waste and dusts in soda digestion and no determination of nitrite and phosphate)</i>	HE, PI
DIN EN ISO 10304–3 (D 22) 1997–11	Water quality – Determination of dissolved anions by liquid chromatography of ions – Part 3: Determination of chromate, iodide, sulphite, thiocyanate and thiosulphate <i>(Restriction: HE: Iodide, sulphite, thiosulphate only)</i>	HE
DIN EN ISO 10304–4 (D 25) 1999–07	Water quality – Determination of dissolved anions by liquid chromatography of ions – Part 4: Determination of chlorate, chloride and chlorite in water with low contamination	PI
DIN EN ISO 14911 (E 34) 1999–12	Water quality – Determination of dissolved Li^+ , Na^+ , NH_4^+ , K^+ , Mn^{2+} , Ca^{2+} , Mg^{2+} , Sr^{2+} and Ba^{2+} using ion chromatography – Method for water and waste water <i>(Restriction: Only NH_4^+)</i>	SV
VGB–M 701 No. 0.2 and 8.8.2 2008–12	Chloride from aqueous extract by ion chromatography <i>(Modification: Here for dusts matrix)</i>	PI

3 Biota – Analysis of bioindicators

3.1 Liquid chromatography of organic compounds with mass selective detectors (LC–MS/MS)

PI–MA–M 02–028 # U 2022–02	Determination of selected PFAS in water, solids and biota by LC–MS/MS	PI
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Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 36 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

3.2 Gas chromatography of organic compounds with mass selective detectors (GC-MSD, GC-MS/MS) (*: PI)

DIN EN ISO 22032 (F 28) 2009-07	Water quality – Determination of selected polybrominated diphenyl ethers in sediment and sewage sludge – Method using extraction and gas chromatography/mass spectrometry (Modification: <i>Other analytes polybrominated biphenyls (PBB), tetrabromobisphenol A (TBBP A), hexabromocyclododecane (HBCD), tribromanisole (TBA); ultrasonic extraction; other internal standards, here biota matrix</i>)	PI
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: <i>Other analytes 16 polycyclic aromatic hydrocarbons in accordance with EPA, 6 Balschmitter polychlorinated biphenyls and PCB 118, tetra to hexa chlorobenzenes and organochlorine pesticides; clean-up in accordance with ASU L 00.00-38/1-4; measurement using GC-MSD; matrix biota</i>)	PI
ASU L 10.00-9 2002-12	Analysis of foodstuffs – Gas chromatographic determination of organotin compounds in fish and mussels (Modification: <i>Here determination in biota</i>)	PI
PI-MA-M 03-081 2022-03	Musk compounds in water and solids (e.g. detergents) using GC-MSD	PI

3.3 Gravimetric analysis of physico-chemical indicators

DIN 38414-S 22 2018-10	Determination of dry residue by freezing and preparation of the freeze-dried mass of sludge (Modification: <i>Matrix here biota</i>)	PI
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3.4 Titrimetric analysis of summary indices of actions and substances (*: PI)

DIN ISO 11261 1997-05	Soil quality – Determination of total nitrogen – Modified Kjeldahl method Also from biota samples (Modification: <i>Matrix here biota</i>)	PI
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Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DIN EN 16169 2012–11	Sludge, treated biowaste and soil – Determination of Kjeldahl nitrogen (replaces DIN ISO 11261 (1997–05)) (Modification: <i>Matrix here biota</i>)	PI
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4 Soil gas and landfill gases

4.1 Sampling

VDI 3860 Blatt 4 2012–06	Measurement of landfill gases – Underground measurements	PI, GE
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VDI 3865 Blatt 2 1998–01	Techniques for active sampling of soil gas (Modification: Only variant c in developed borewells)	GE, HI, PI
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4.2 Gas chromatography of organic compounds

4.2.1 With conventional detectors (GC–FID, GC–ECD)

DIN 51872–4 1990–06	Testing of gaseous fuels and other gases; determination of components; gas chromatography method; determination of hydrogen, oxygen, nitrogen, carbon monoxide and carbon dioxide, methane and short–chain hydrocarbons using GC–FID and in soil gas, landfill gas, gases and soil gas	GE
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HI–MA–M 03–020 # U 2021–08	Volatile alkanes C1–C4 in air with HS–GC–FID	HI
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4.2.2 With mass selective detectors (GC–MS; GC–MS/MS)

DIN 38407–F 9 1991–05	Determination of benzene and some of its derivatives by gas chromatography (Modification: <i>Matrix here air</i>)	HI
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DIN 38413–P 2 1988–05	Determination of vinyl chloride (chloroethene) by headspace gas chromatography	HI
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VDI 3865 Blatt 4 2000–12	Measurement of organic soil pollutants – Gas chromatographic determination of volatile organic compounds in soil gas – Direct measurement	GE
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Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

EPA TO-17 Determination of Volatile Organic Compounds in Ambient GE
1999-01 Air Using Active Sampling Onto Sorbent Tubes
(Restriction: *Without sampling*)

HI-MA-M 03-025 # U VOC, BTEX, C3 aromatics in air with HS-GC-MS HI
2021-10

5 Test methods for the specialist module for soil and contaminated sites

Revised: 16.08.2012

Test area 1: Solids

Section 1.1 Sampling and on-site examination

Not used.

Section 1.2 Laboratory – Analysis of inorganic parameters

Basic parameters and sample preparation				
Test parameters	Methods/notes	Method		Location
Sample preparation and processing		DIN 19747: 2009	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Dry matter		DIN ISO 11465: 1996	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
		DIN EN 14346: 2007	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Organic carbon and total carbon after dry combustion (TOC)	Air-dried soil samples	DIN ISO 10694: 1996	<input checked="" type="checkbox"/>	GE, PI
		DIN EN 13137: 2001	<input checked="" type="checkbox"/>	GE, PI
		DIN EN 15936: 2012	<input checked="" type="checkbox"/>	GE, PI
pH value (CaCl ₂)		DIN ISO 10390: 2005	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Gross density – optional		DIN ISO 11272: 2001	<input checked="" type="checkbox"/>	GE
Particle size distribution – optional	Pipette analysis	DIN ISO 11277: 2002	<input type="checkbox"/>	
	Hydrometer method	DIN 18123: 2011 with LAGA PN98	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Analysis of inorganic parameters				
Test parameters	Methods/notes	Method		Location
Aqua regia extract	Thermal, open vessel	DIN ISO 11466: 1997	<input checked="" type="checkbox"/>	HI, PI
	Microwave digestion	DIN EN 13657: 2003	<input checked="" type="checkbox"/>	HI, PI
Ammonium nitrate extract		DIN 19730: 2009	<input checked="" type="checkbox"/>	HI, PI
Alkaline digestion method – optional	Metaborate fusion for chromium(VI) analysis	DIN EN 15192: 2007	<input type="checkbox"/>	
Extraction for determination of thallium – optional	HNO ₃ , H ₂ O ₂	DIN ISO 20279: 2006	<input type="checkbox"/>	
Arsenic (As) Antimony (Sb)	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
	ET–AAS or hydride AAS	DIN ISO 20280: 2010	<input type="checkbox"/>	
Cadmium (Cd) Chromium (Cr), total Cobalt (Co) Copper (Cu) Nickel (Ni) Lead (Pb) Zinc (Zn)	ET–AAS	DIN ISO 11047: 2003	<input type="checkbox"/>	
	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
Mercury (Hg)	AAS	DIN EN 1483: 2007	<input checked="" type="checkbox"/>	PI
	Cold vapour AAS or cold vapour AFS	DIN ISO 16772: 2005	<input checked="" type="checkbox"/>	PI
Cyanide		DIN ISO 17380: 2011	<input checked="" type="checkbox"/>	PI
		DIN ISO 11262: 2012	<input checked="" type="checkbox"/>	PI
Chromium(VI) – optional	IC with photometric detection	DIN EN 15192: 2007	<input type="checkbox"/>	
Molybdenum (Mo) Vanadium (V) – optional	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
Selenium (Se) – optional	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
	ET–AAS or hydride AAS	DIN ISO 20280: 2010	<input type="checkbox"/>	
Thallium (Tl) from the HNO ₃ /H ₂ O ₂ –extract – optional	ET–AAS	DIN ISO 20279: 2006	<input type="checkbox"/>	
	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
Uranium (U) Tungsten (W) – optional	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 40 of 68

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

Section 1.3 Laboratory – Analysis of organic parameters

Basic parameters and sample preparation				
Test parameters	Methods/notes	Method		Location
Sample preparation and processing		DIN 19747: 2009	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Dry matter		DIN ISO 11465: 1996	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
		DIN EN 14346: 2007	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Organic carbon and total carbon after dry combustion (TOC)	Air-dried soil samples	DIN ISO 10694: 1996	<input checked="" type="checkbox"/>	GE, PI
		DIN EN 13137: 2001	<input checked="" type="checkbox"/>	GE, PI
		DIN EN 15936: 2012	<input checked="" type="checkbox"/>	PI, GE
pH value (CaCl ₂)		DIN ISO 10390: 2005	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Gross density – optional		DIN ISO 11272: 2001	<input checked="" type="checkbox"/>	GE
Particle size distribution – optional	Pipette analysis	DIN ISO 11277: 2002	<input type="checkbox"/>	
	Hydrometer method	DIN 18123: 2011 with LAGA PN98	<input checked="" type="checkbox"/>	PI

Analysis of organic parameters				
Test parameters	Methods/notes	Method		Location
Polycyclic aromatic hydrocarbons (PAH)	GC–MS	DIN ISO 18287: 2006	<input checked="" type="checkbox"/>	GE, HI, PI
16 PAH (EPA)	HPLC–UV/F Acenaphthylene cannot be determined by fluorescence detector	DIN ISO 13877: 2000	<input type="checkbox"/>	
		DIN 38414–23: 2002	<input type="checkbox"/>	
Hexachlorobenzene	GC–ECD, GC–MS	DIN ISO 10382: 2006	<input checked="" type="checkbox"/>	PI
Pentachlorophenol	GC–ECD, GC–MS	DIN ISO 14154: 2005	<input checked="" type="checkbox"/>	PI
Aldrin, DDT, HCH mixture	GC–ECD, GC–MS	DIN ISO 10382: 2003	<input checked="" type="checkbox"/>	PI
		DIN EN 15308: 2008	<input checked="" type="checkbox"/>	PI

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Analysis of organic parameters				
Test parameters	Methods/notes	Method		Location
Polychlorinated biphenyls (PCB)	GC-ECD, GC-MS Extraction with acetone/petroleum ether or Soxhlet extraction The type of summation must be indicated (PCB6/PCB7)	DIN ISO 10382: 2003	<input checked="" type="checkbox"/>	GE, HI, PI
		DIN EN 15308: 2008	<input checked="" type="checkbox"/>	GE, HI, PI
		DIN 38414-20: 1996	<input checked="" type="checkbox"/>	GE, HI, PI
Typical explosive compounds (HPLC) – optional	Extraction with methanol or acetonitrile and quantification using HPLC-UV/DAD	E DIN ISO 11916-1: 2011	<input type="checkbox"/>	
Typical explosive compounds (GC) – optional	Extraction with methanol. Dissolution in toluene and quantification using GC-ECD or GC-MS	E DIN ISO 11916-2: 2011	<input checked="" type="checkbox"/>	PI
Petroleum hydrocarbons (C ₁₀ -C ₄₀) – optional	GC-FID	DIN ISO 16703: 2005	<input checked="" type="checkbox"/>	GE, HI, PI
		LAGA KW/04: 2009	<input checked="" type="checkbox"/>	GE, HI, PI
BTEX aromatic compounds, VOC – optional	Headspace, GC	DIN ISO 22155: 2006	<input checked="" type="checkbox"/>	GE, HI, PI

Section 1.4: Laboratory – Analysis of dioxins and furans

Basic parameters and sample preparation				
Test parameters	Methods/notes	Method		Location
Sample preparation and processing		DIN 19747: 2009	<input checked="" type="checkbox"/>	PI
Dry matter		DIN ISO 11465: 1996	<input checked="" type="checkbox"/>	PI
		DIN EN 14346: 2007	<input checked="" type="checkbox"/>	PI
Organic carbon and total carbon after dry combustion (TOC)	Air-dried soil samples	DIN ISO 10694: 1996	<input checked="" type="checkbox"/>	PI
		DIN EN 13137: 2001	<input checked="" type="checkbox"/>	PI
		DIN EN 15936: 2012	<input checked="" type="checkbox"/>	PI
pH value (CaCl ₂)		DIN ISO 10390: 2005	<input checked="" type="checkbox"/>	PI
Gross density – optional		DIN ISO 11272: 2001	<input type="checkbox"/>	
Particle size distribution – optional	Pipette analysis	DIN ISO 11277: 2002	<input type="checkbox"/>	
	Hydrometer method	DIN 18123: 2011 with LAGA PN98	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 42 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Basic parameters and sample preparation				
Test parameters	Methods/notes	Method		Location
PCDD / PCDF, DL-PCBs	GC-MS, analysis in accordance with the internal standard method using the relevant 13C12-labelled standards for a congener in each case	DIN 38414-24: 2000 DL-PCB: Making allowance for DIN 38407-3: 1998	<input checked="" type="checkbox"/>	PI

Test area 2: Eluates and percolates, aqueous media

Section 2.1 Sampling and on-site examination

Sampling				
Test parameters	Methods/notes	Method		Location
Sampling programmes and sampling techniques		DIN EN ISO 5667-1: 2007	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Sampling of groundwater	AQS Data Sheet P 8/2: 1996	ISO 5667-11: 2009 DIN 38402-13: 1985 DVGW Work Sheet S W 112: 2011	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Sampling of leachate		No standardised method currently available Where applicable E-DWA-M 905: 2008	<input checked="" type="checkbox"/>	GE, HI, PI
Sampling of surface water (running waters)	AQS Data Sheet P 8/3: 1998	DIN 38402-15: 2010	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Sampling of surface water (barrages and lakes)		DIN 38402-12: 1985	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI

On-site testing				
Test parameters	Methods/notes	Method		Location
Colouring		DIN EN ISO 7887: 2012	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Turbidity		DIN EN ISO 7027: 2000	<input checked="" type="checkbox"/>	FG, GE, PI
Odour		DEV B1/2 1971	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 43 of 68

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

On-site testing				
Test parameters	Methods/notes	Method		Location
Temperature		DIN 38404-4: 1976	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
pH value		DIN EN ISO 10523: 2012	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Oxygen content		DIN EN 25814: 1992	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Electrical conductivity		DIN EN 27888: 1993	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Redox potential		DIN 38404-6: 1984	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Sample storage, sample pretreatment, sample transport		DIN EN ISO 5667-3: 2004	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI

Section 2.2 Laboratory – Analysis of eluates/percolates for inorganic parameters

Eluates/percolates				
Test parameters	Methods/notes	Method		Location
Batch test – Elution of inorganic substances		DIN 19529: 2009	<input checked="" type="checkbox"/>	FG, GE, HI, PI
Batch test – Elution of organic substances		DIN 19527: 2012	<input checked="" type="checkbox"/>	FG, GE, HI, PI
Batch test – Elution of inorganic substances – optional		DIN EN 12457-4: 2003	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Percolation method for organic and inorganic substances – optional		DIN 19528: 2009	<input checked="" type="checkbox"/>	FG, GE, HI
Examination for absorption availability – optional		DIN 19738: 2004	<input checked="" type="checkbox"/>	HI

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Analysis – Inorganic parameters				
Test parameters	Methods/notes	Method		Location
Antimony (Sb) Arsenic (As)	ICP–OES	DIN EN ISO 11885: 2009	<input checked="" type="checkbox"/>	PI
	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
	ET–AAS or hydride AAS	DIN ISO 20280: 2010	<input type="checkbox"/>	
Lead (Pb) Cadmium (Cd) Chromium (Cr), total Cobalt (Co) Copper (Cu) Molybdenum (Mo) Nickel (Ni) Zinc (Zn)	ET–AAS	DIN EN ISO 15586: 2004	<input type="checkbox"/>	
	ICP–OES	DIN EN ISO 11885: 2009	<input checked="" type="checkbox"/>	PI
	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
Mercury (Hg)	AAS	DIN EN 1483: 2007	<input checked="" type="checkbox"/>	PI
	Cold vapour AAS or cold vapour AFS	DIN ISO 16772: 2005	<input checked="" type="checkbox"/>	PI
Cyanide (CN–), total Cyanide, readily liberated	Spectrophotometry	DIN EN ISO 14403: 2002	<input checked="" type="checkbox"/>	GE, PI
		DIN 38405–13: 2011	<input type="checkbox"/>	
		DIN EN ISO 17380: 2011	<input checked="" type="checkbox"/>	PI
Fluoride, chloride, sulphate	Ion chromatography	DIN EN ISO 10304– 1:2009	<input checked="" type="checkbox"/>	HE, PI
	Individual method	DIN 38405–1, –4, –5: 1985	<input checked="" type="checkbox"/>	FG, HE nur D4
Vanadium (V) – optional	ET–AAS	DIN EN ISO 15586: 2004	<input type="checkbox"/>	
	ICP–OES	DIN EN ISO 11885: 2009	<input checked="" type="checkbox"/>	PI
	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
Uranium (U) – optional	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 45 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Analysis – Inorganic parameters				
Test parameters	Methods/notes	Method		Location
Tin (Sn) Thallium (Tl) Tungsten (W) – optional	ICP–OES	DIN EN ISO 11885: 2009	<input checked="" type="checkbox"/>	PI
	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
Selenium (Se) – optional	ET–AAS	DIN EN ISO 15586: 2004	<input type="checkbox"/>	
	ICP–OES	DIN EN ISO 11885: 2009	<input checked="" type="checkbox"/>	PI
	ICP–OES	DIN ISO 22036: 2009	<input checked="" type="checkbox"/>	PI
	ICP–MS	DIN EN ISO 17294–2: 2005	<input checked="" type="checkbox"/>	PI
	ET–AAS or hydride AAS	DIN ISO 20280: 2010	<input type="checkbox"/>	
Chromium (Cr VI)	Spectrophotometry	DIN 38405–24: 1987	<input checked="" type="checkbox"/>	GE, PI
	Ion chromatography	DIN EN ISO 10304–3: 1997	<input type="checkbox"/>	

Section 2.3 Laboratory – Analysis of eluates/percolates for organic parameters

Eluates/percolates				
Test parameters	Methods/notes	Method		Location
Batch test – Elution of inorganic substances		DIN 19529: 2009	<input checked="" type="checkbox"/>	FG, GE, HI, PI
Batch test – Elution of organic substances		DIN 19527: 2012	<input checked="" type="checkbox"/>	FG, GE, HI, PI
Batch test – Elution of inorganic substances – optional		DIN EN 12457–4: 2003	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Percolation method for organic and inorganic substances – optional		DIN 19528: 2009	<input checked="" type="checkbox"/>	GE, HI
Examination for absorption availability – optional		DIN 19738: 2004	<input checked="" type="checkbox"/>	HI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 46 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Analysis – Organic parameters				
Test parameters	Methods/notes	Method		Location
Aromatics (BTEX)	Purge + trap / desorption, GC-MS	DIN EN ISO 15680: 2004	<input type="checkbox"/>	
	Liquid extraction and headspace, GC	DIN 38407-9: 1991	<input checked="" type="checkbox"/>	GE, HI, PI
	Headspace-SPME, GC-MS	DIN 38407-41: 2011	<input type="checkbox"/>	
Volatile halogenated hydrocarbons (VOC)	Purge + trap / desorption, GC-MS	DIN EN ISO 15680: 2004	<input type="checkbox"/>	
	Liquid extraction and headspace, GC	DIN EN ISO 10301: 1997	<input checked="" type="checkbox"/>	GE, HI, PI
	Headspace-SPME, GC-MS	DIN 38407-41: 2011	<input type="checkbox"/>	
Aldrin	GC-ECD, GC-MS	DIN EN ISO 6468: 1997	<input checked="" type="checkbox"/>	PI
		DIN 38407-2: 1993	<input checked="" type="checkbox"/>	PI
Dichlorodiphenyltrichloroethane (DDT)	GC-ECD, GC-MS	DIN EN ISO 6468: 1997	<input checked="" type="checkbox"/>	PI
		DIN 38407-2: 1993	<input checked="" type="checkbox"/>	PI
Chlorophenols	GC-ECD, GC-MS	DIN EN 12673: 1999	<input checked="" type="checkbox"/>	PI
Chlorobenzenes (Cl3–Cl6)	GC-ECD, GC-MS	DIN 38407-2: 1993	<input checked="" type="checkbox"/>	PI
	Liquid extraction, GC-ECD, GC-MS	DIN EN ISO 6468: 1997	<input checked="" type="checkbox"/>	PI
Chlorobenzenes (Cl1–Cl3)	Liquid extraction and headspace, GC-ECD, MS where applicable	DIN EN ISO 10301: 1997	<input checked="" type="checkbox"/>	GE, PI
Polychlorinated biphenyls (PCB)	GC-ECD, GC-MS Type of summation (PCB6 / PCB7) must be specified	DIN 38407-2: 1993	<input checked="" type="checkbox"/>	GE, PI
		DIN 38407-3: 1998	<input checked="" type="checkbox"/>	GE, PI
16 PAH (EPA)	HPLC-F	DIN EN ISO 17993: 2004	<input type="checkbox"/>	
	GC-MS	DIN 38407-39: 2011	<input checked="" type="checkbox"/>	GE, PI
Naphthalene	GC-FID, GC-MS	DIN EN ISO 15680: 2004	<input type="checkbox"/>	
		DIN 38407-9: 1991	<input checked="" type="checkbox"/>	GE
Petroleum hydrocarbons (MKW, C ₁₀ –C ₄₀)	GC-FID	DIN EN ISO 9377-2: 2001	<input checked="" type="checkbox"/>	GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 47 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Analysis – Organic parameters				
Test parameters	Methods/notes	Method		Location
Typical explosive compounds (HPLC) – optional	HPLC / UV detection	DIN EN ISO 22478: 2006	<input checked="" type="checkbox"/>	
Typical explosive compounds (GC) – optional	Determination of selected nitroaromatic compounds using GC	DIN 38407–17: 1999	<input checked="" type="checkbox"/>	PI
Phenols – optional	GC–ECD, GC–MS	ISO 8165–2: 1999	<input checked="" type="checkbox"/>	PI
		DIN EN 12673: 1999	<input checked="" type="checkbox"/>	PI

Test area 3: Soil gas, landfill gas

Section 3.1 Sampling and on-site examination

Sampling				
Test parameters	Methods/notes	Method		Location
Pile core probing		DIN ISO 10381–2: 2003 DIN EN ISO 22475–1: 2007	<input type="checkbox"/>	
Sampling of soil gas		VDI 3865 Blatt 2: 1998 VDI 3865 Blatt 1: 2005 DIN ISO 10381–7: 2007	<input checked="" type="checkbox"/>	GE, PI

On-site testing				
Test parameters	Methods/notes	Method		Location
Carbon dioxide (CO ₂)	Direct–display instrument		<input checked="" type="checkbox"/>	GE
Methane (CH ₄)	Direct–display instrument		<input checked="" type="checkbox"/>	GE
Hydrogen sulphide (H ₂ S)	Direct–display instrument		<input checked="" type="checkbox"/>	GE
Oxygen (O ₂)	Direct–display instrument		<input checked="" type="checkbox"/>	GE
Sum parameter trace gases	Direct–display instrument		<input checked="" type="checkbox"/>	GE

Section 3.2 Laboratory – Analysis of soil gas, landfill gas

Test parameters	Methods/notes	Method		Location
Aromatics (BTEX)		VDI 3865 Blatt 3: 1998	<input checked="" type="checkbox"/>	GE, PI
		VDI 3865 Blatt 4: 2000	<input type="checkbox"/>	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 48 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Test parameters	Methods/notes	Method		Location
Volatile halogenated hydrocarbons (VOC)		VDI 3865 Blatt 3: 1998	<input checked="" type="checkbox"/>	GE, PI
		VDI 3865 Blatt 4: 2000	<input type="checkbox"/>	

6 Test methods for the specialist module for waste

Revised: May 2018

Test area 1: Sewage sludge

	Sections / Parameters	Basis / Methods		Locations
		AbfklärV		
1.1	Sampling and sample preparation	Section 32 (3) and (4) AbfklärV		
a)	Sampling	DIN EN ISO 5667–13 (08.11) and DIN 19698–1 (05.14)	<input checked="" type="checkbox"/>	GE, HI, PI
b)	Sample preparation	DIN 19747 (07.09)	<input checked="" type="checkbox"/>	FG, GE, HI, PI

1.2	Heavy metals and chromium(VI)	Section 5 (1) (1) AbfklärV		
	Heavy metals			
	Aqua regia digestion	DIN EN 16174 (11.12)	<input checked="" type="checkbox"/>	HI, PI
		DIN EN 16174 Method A (11.12)	<input checked="" type="checkbox"/>	HI, PI
		DIN EN 13346 Method A (04.01)	<input checked="" type="checkbox"/>	HI, PI
	Arsenic, lead, cadmium, chromium, copper, nickel, zinc, iron (from aqua regia digestion)	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
		DIN ISO 11047 (05.03)	<input type="checkbox"/>	
		DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN EN 16170 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN EN 16171 (01.17)	<input checked="" type="checkbox"/>	PI
		CEN/TS 16172; DIN SPEC 91258 (04.13)	<input type="checkbox"/>	
		DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 49 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Thallium (from aqua regia digestion)	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 17294-2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN 38406-26 (07.97)	<input type="checkbox"/>	
	DIN EN 16170 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN 16171 (01.17)	<input checked="" type="checkbox"/>	PI
	CEN/TS 16172; DIN SPEC 91258 (04.13)	<input type="checkbox"/>	
	DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
Mercury (from aqua regia digestion)	DIN EN ISO 17852 (04.08)	<input type="checkbox"/>	
	DIN EN 16175-1 (12.16)	<input checked="" type="checkbox"/>	PI
	DIN EN 16175-2 (12.16)	<input type="checkbox"/>	
	DIN EN 16171 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 12846 (08.12)	<input checked="" type="checkbox"/>	PI
ChromiumVI (from alkaline hot extract)	DIN EN 16318 (07.16)	<input checked="" type="checkbox"/>	GE, PI
	DIN EN 15192 (02.07)	<input type="checkbox"/>	
	DIN 10304-3 (11.97)	<input type="checkbox"/>	
	DIN EN ISO 17294-2 (01.17)⁵	<input type="checkbox"/>	
1.3	Adsorbed organic bound halogens	Section 5 (1) (2) AbfklärV	
AOX (from dry residue)	DIN 38414-18 (11.89)	<input type="checkbox"/>	
	DIN EN 16166 (11.12)	<input type="checkbox"/>	
1.4	Physical parameters, nutrients	Section 5 (1) (3) – (9) AbfklärV	
Dry residue	DIN EN 15934 (11.12)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
	DIN EN 12880 (02.01)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
Organic substance as loss on ignition (from dry residue)	DIN EN 15935 (11.12)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
	DIN EN 12879 (02.01)	<input checked="" type="checkbox"/>	FG, GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 50 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

	pH value	DIN EN 15933 (11.12)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
		DIN 38414-5 (07.09)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
	Alkaline agents as CaO	VDLUFA Methodenbuch Volume II.2, Method 4.5.1	<input checked="" type="checkbox"/>	PI
	Ammonium nitrogen (NH ₄ -N)	DIN 38406-5 (10.83)	<input checked="" type="checkbox"/>	PI
	Total nitrogen (N _{total})	DIN EN 13342 (01.01)	<input checked="" type="checkbox"/>	PI
		DIN EN 16169 (11.12)	<input checked="" type="checkbox"/>	PI
		DIN ISO 11261 (05.97)	<input checked="" type="checkbox"/>	PI
	Aqua regia digestion	DIN EN 16174 (11.12)	<input checked="" type="checkbox"/>	HI, PI
		DIN EN 13346 Method A (04.01)	<input checked="" type="checkbox"/>	HI, PI
	Phosphorus (P) (from aqua regia digestion) (conversion: phosphorus (P) = 2,291 for phosphorus pentoxide (P ₂ O ₅))	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 6878 (09.04)	<input type="checkbox"/>	
		DIN EN ISO 17294-2 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN EN 16171 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN EN 16170 (01.17)	<input checked="" type="checkbox"/>	PI
	Persistent organic pollutants	Section 5 (2) (1) – (4) AbfklärV		
1.5	Polychlorinated biphenyls (PCB)	DIN 38414-20 (01.96)	<input checked="" type="checkbox"/>	GE, HI, PI
		DIN EN 16167 (11.12)	<input checked="" type="checkbox"/>	GE, HI, PI
1.6	Polychlorinated dibenzodioxins and furans (PCDD/PCDF) and dioxin-like polychlorinated biphenyls (DL-PCB)	DIN CEN/TS 16190; DIN SPEC 91267 (05.12)	<input type="checkbox"/>	
		DIN 38414-24 (10.00)	<input checked="" type="checkbox"/>	PI
1.7	Benzo(a)pyrene (BaP)	DIN EN 15527 (09.08)	<input checked="" type="checkbox"/>	GE, HI, PI
		DIN 38414-23 (02.02)	<input type="checkbox"/>	
		DIN CEN/TS 16181; DIN SPEC 91243 (12.13)	<input checked="" type="checkbox"/>	GE, HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 51 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

1.8	Polyfluorinated compounds (PFC) with the individual substances perfluorooctanoic acid and perfluorooctanesulphonic acid (PFOA/PFOS)	DIN 38414–14 (08.11)	<input checked="" type="checkbox"/>	PI
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Test area 2: Base

	Sections / Parameters	Basis / Methods		Locations
		AbfKlärV and BioAbfV		
2.1	Sampling and sample preparation	Section 32 (2) AbfKlärV and Section 9 BioAbfV		
a)	Sampling	DIN ISO 10381–1 (08.03) and DIN ISO 10381–4 (04.04)	<input type="checkbox"/>	
b)	Sample preparation	DIN ISO 19747 (07.09)	<input checked="" type="checkbox"/>	FG, GE, HI, PI

2.2	Heavy metals	Section 4 (1) AbfKlärV Section 9 (2) BioAbfV		
	Aqua regia digestion	DIN EN 16174 (11.12)	<input checked="" type="checkbox"/>	HI, PI
		DIN EN 13657 (01.03)	<input checked="" type="checkbox"/>	HI, PI
	Lead, cadmium, chromium, copper, nickel, zinc, (from aqua regia digestion)	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
		DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
		DIN EN 16170 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN EN 16171 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	Mercury (from aqua regia digestion)	DIN ISO 16772 (06.05)	<input checked="" type="checkbox"/>	PI
		DIN EN 12846 (08.12)* a method incorrectly specified in legislation; DIN EN ISO 12846 (08.12) correct	<input checked="" type="checkbox"/>	PI
		EN 16175–1 (12.16)	<input checked="" type="checkbox"/>	PI
		EN 16175–2 (12.16)	<input type="checkbox"/>	
		DIN EN 16171 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 17852 (04.08)	<input type="checkbox"/>	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 52 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

2.3	Physical parameters, phosphate	Section 4 (1) AbfklärV Section 9 (2) BioAbfV		
	Phosphate (from CAL/DL extract; P-content determination must be converted to o-phosphate)	VDLUF A Methodenbuch, Volume I, Method A 6.2.1.1 (6th Part 2012)	<input checked="" type="checkbox"/>	PI
		VDLUF A Methodenbuch, Volume I, Method A 6.2.1.2 (Main Volume	<input type="checkbox"/>	
		DIN EN ISO 10304-1 (07.09)	<input type="checkbox"/>	
		DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
	Soil texture (clay content)	DIN 19682-2 (07.14)	<input type="checkbox"/>	
		DIN 18123 (04.11)	<input checked="" type="checkbox"/>	PI
	pH value	DIN EN 15933 (11.12)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
		ISO 10390 (02.05)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
		VDLUF A Methodenhandbuch I A 5.1.1	<input type="checkbox"/>	
	Dry residue	DIN EN 15934 (11.12)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
		DIN EN 12880 (02.01)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
	Organic substances	Section 4 (2) AbfklärV		
2.4	Polychlorinated biphenyls (PCB)	DIN ISO 10382 (05.03)	<input checked="" type="checkbox"/>	GE, HI, PI
		DIN EN 16167 (11.12)	<input checked="" type="checkbox"/>	GE, HI, PI
2.5	Benzo(a)pyrene (BaP)	DIN ISO 18287 (05.06)	<input checked="" type="checkbox"/>	GE, HI, PI
		DIN CEN TS 16181; DIN SPEC 91243 (12.13)	<input checked="" type="checkbox"/>	GE, HI, PI
		DIN 38414-23 (02.02)	<input type="checkbox"/>	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 53 of 68

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

Test area 3: Biowaste

	Sections/ Parameter	Basis/ Method		Locations
		BioAbfV		
3.1	Sampling and sample preparation	Section 4 (9) BioAbfV		
	a) Sampling	DIN EN 12579 (01.00) and DIN 51750– 1 (12.90) and DIN 51750– 2 (12.90) and DIN EN ISO 5667– 13 (08.11)	<input checked="" type="checkbox"/>	GE, PI
	b) Sample preparation	DIN 19747 (07.09) in conjunction with Annex 3, Section 1.3.3	<input checked="" type="checkbox"/>	GE, PI
		DIN EN 13040 (02.07)	<input checked="" type="checkbox"/>	GE, HI, PI
3.2	Heavy metals	Section 4 (5) BioAbfV		
	Aqua regia digestion	DIN EN 13650 (01.02)	<input checked="" type="checkbox"/>	PI
		DIN EN 16174 (11.12)	<input checked="" type="checkbox"/>	HI, PI
		DIN EN 13657 (01.03)	<input checked="" type="checkbox"/>	HI, PI
		DIN EN 13346 (04.01)	<input checked="" type="checkbox"/>	HI, PI
	Lead (from aqua regia digestion)	DIN 38406– 6 (07.98)	<input type="checkbox"/>	
		DIN ISO 11047 (05.03)	<input type="checkbox"/>	
		DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
		DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
	Cadmium (from aqua regia digestion)	DIN EN ISO 5961 (05.95)	<input type="checkbox"/>	
		DIN ISO 11047 (05.03)	<input type="checkbox"/>	
		DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
		DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 17294– 2 (01.17)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 54 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Chromium (from aqua regia digestion)	DIN EN 1233 (08.96)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
	DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294– 2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
Copper (from aqua regia digestion)	DIN 38406– 7 (09.91)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
	DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294– 2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
Nickel (from aqua regia digestion)	DIN 38406– 11 (09.91)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
	DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294– 2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
Mercury (from aqua regia digestion)	DIN EN 1483 (07.07)	<input checked="" type="checkbox"/>	PI
	DIN EN 12338 (10.98)	<input type="checkbox"/>	
	DIN EN ISO 12846 (08.12)	<input checked="" type="checkbox"/>	PI
Zinc (from aqua regia digestion)	DIN 38406– 8 (10.04)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
	DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294– 2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 55 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

3.3	Physical parameters, foreign matter	Section 4 (5) BioAbfV		
	Dry residue	DIN EN 13040 (02.07)	<input checked="" type="checkbox"/>	GE, HI, PI
		DIN EN 13040 (01.08)	<input checked="" type="checkbox"/>	GE, HI, PI
	pH value	DIN EN 13037 (02.00)	<input type="checkbox"/>	
		DIN EN 13037 (01.12)	<input checked="" type="checkbox"/>	GE, PI
	Salt content	DIN EN 13038 (02.00)	<input type="checkbox"/>	
		DIN EN 13038 (01.12)	<input checked="" type="checkbox"/>	GE, PI
	Organic substance as loss on ignition (from dry residue)	DIN EN 13039 (02.00)	<input checked="" type="checkbox"/>	GE, PI
	Stones and foreign matter	Annex 3 BioAbfV, No. 1.3.3 Method book for the analysis of organic fertilisers, soil improvers and substrates, Bundesgütegemeinschaft Kompost e.V.	<input checked="" type="checkbox"/>	GE, PI

Section 3.4 – Process testing

Not used

3.5	Testing of sanitised biowaste *)	Section 3 (4) BioAbfV		
	- Disease hygiene			
	Salmonella	Annex 2 BioAbfV	<input checked="" type="checkbox"/>	HHGS
	- Phyto-hygiene			
	Viable seeds and parts of plants capable of producing shoots	Annex 2 BioAbfV	<input checked="" type="checkbox"/>	GE

Test area 4: Waste oil, insulating liquid

Section 4.1 – Sampling

Not used

	Sections/ Parameter	Basis/ Method		Locations
		Section 5 (3) AltöIV		
4.2	PCB, halogen (only in accordance with AltöIV)	Annex 2 No. 2, 3		

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 56 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Sections/ Parameter	Basis/ Method		Locations
PCB	DIN EN 12766– 1 (11.00) in conjunction with DIN EN 12766– 2 (12.01), Method B	<input checked="" type="checkbox"/>	GE
Total halogen (for Altölv only)	Annex 2, No. 3 Altölv	<input checked="" type="checkbox"/>	GE

Test area 5: Landfill waste

Sections/ Parameter	Basis/ Method		Locations
	Section 6 (2), Section 8 (1), (3) and (5) DepV		
5.1	Sampling	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI, MG

5.2	Determination of total content in solid		
	Sample preparation	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
	Digestion method (aqua regia)	<input checked="" type="checkbox"/>	HI, PI
	Loss on ignition	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
	TOC (total organic carbon)	<input checked="" type="checkbox"/>	GE, PI
	BTEX (benzene and derivatives)	<input checked="" type="checkbox"/>	GE, HI, PI
		<input checked="" type="checkbox"/>	GE, HI, PI
	PCB (polychlorinated biphenyls)	<input checked="" type="checkbox"/>	GE, HI, PI
	Petroleum hydrocarbons	<input checked="" type="checkbox"/>	GE, HI, PI
	PAH (polycyclic aromatic hydrocarbons)	<input checked="" type="checkbox"/>	GE, HI, PI
	Density	<input checked="" type="checkbox"/>	GE

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 57 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

	Gross calorific value	DIN EN 15170 (05.09)	<input checked="" type="checkbox"/>	HE
	Cadmium, chromium, copper, nickel, lead and zinc	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
		DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
		DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
	Mercury	DIN EN 12846 (08.12)* a method incorrectly specified in legislation; DIN EN ISO 12846 (08.12) correct	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 17852 (04.08)	<input type="checkbox"/>	
	Extractable lipophilic substances	LAGA KW/04 (12.09)	<input checked="" type="checkbox"/>	GE, HI, PI

5.3	Determination of contents in eluate			
	Eluate preparation with liquid/solid ratio 10/1	DIN EN 12457– 4 (01.03)	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
	Eluate preparation each with constant pH 4 and 11 / acid neutralisation capacity	LAGA Guideline EW 98 (2002)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
	Up–flow percolation test	DIN CEN/TS 14405 (09.04)	<input type="checkbox"/>	
		DIN 19528 (01.09)	<input type="checkbox"/>	HI, FG
	pH value of eluate	DIN 38404– 5 (07.09)	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
	DOC	DIN EN 1484 (08.97)	<input checked="" type="checkbox"/>	GE, PI
	DOC at a pH between 7.5 and 8	LAGA Guideline EW 98 p (2002)	<input type="checkbox"/>	
	Phenols	DIN 38409– 16 (06.84)	<input type="checkbox"/>	
		DIN EN ISO 14402 (12.99)	<input checked="" type="checkbox"/>	PI
		DIN 38407– 27 (10.12)	<input checked="" type="checkbox"/>	PI
	Arsenic	DIN EN ISO 11969 (11.96)	<input type="checkbox"/>	
		DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
		DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 15586 (02.04)	<input type="checkbox"/>	
		DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 58 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Lead, cadmium, copper, nickel, zinc, chromium	DIN EN ISO 15586 (02.04)	<input type="checkbox"/>	
	DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI
Mercury	DIN EN ISO 12846 (08.12)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17852 (04.08)	<input type="checkbox"/>	
Barium, molybdenum, selenium	DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI
Antimony	DIN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 15586 (02.04)	<input type="checkbox"/>	
	DIN 38405– 32 (05.00)	<input type="checkbox"/>	
	DIN EN ISO 17294– 2 (02.05)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI
Total dissolved solids	DIN EN 15216 (01.08)	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
	DIN 38409– 1 (01.87)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
	DIN 38409– 2 (03.87)	<input checked="" type="checkbox"/>	FG, GE, HI, PI
Conductivity of eluate	DIN EN 27888 (11.93)	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Determination of dry residue	DIN EN 14346 (03.07)	<input checked="" type="checkbox"/>	B, FG, GE, HI, PI
Chloride	DIN EN ISO 10304– 1 (07.09)	<input checked="" type="checkbox"/>	HE, PI
	DIN 38405– 1 (12.85)	<input type="checkbox"/>	
	DIN EN ISO 15682 (01.02)	<input type="checkbox"/>	
Sulphate	DIN EN ISO 10304– 1 (07.09)	<input checked="" type="checkbox"/>	HE, PI
	DIN 38405– 5 (01.85)	<input type="checkbox"/>	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 59 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

	Cyanide, readily liberated	DIN 38405– 13 (04.11)	<input checked="" type="checkbox"/>	PI
		In waste containing sulphide: DIN ISO 17380 (05.06)	<input checked="" type="checkbox"/>	PI
		DIN EN ISO 14403– 1 (10.12)	<input type="checkbox"/>	
	Fluoride	DIN 38405– 4 (07.85)	<input checked="" type="checkbox"/>	FG, HE
		DIN EN ISO 10304– 1 (07.09)	<input checked="" type="checkbox"/>	HE, PI

5.4	Biodegradability of the dry residue of the original substance	Annex 4 No. 3.3 DepV		
	Breathability over 4 days (AT ₄)	Annex 4 No. 3.3.1 DepV	<input checked="" type="checkbox"/>	GE
	Gas formation over 21 days (GB ₂₁)	Annex 4 No. 3.3.2 DepV	<input checked="" type="checkbox"/>	GE

Test area 6: Wood waste

	Sections/ Parameter	Basis/ Method		Location
		AltholzV		
6.1	Sampling and sample preparation	Section 6 (6) AltholzV		
	a) Sampling	LAGA PN 98 in conjunction with Annex IV No. 1.1, AltholzV	<input checked="" type="checkbox"/>	FG, GE, HI, PI
	b) Sample preparation	DIN 19747 (07.09) in conjunction with Annex IV No. 1.3	<input checked="" type="checkbox"/>	GE, HI
	Preparation of laboratory sample	DIN 19747 (07.09) in conjunction with DIN 51701– 3 (08.85)	<input checked="" type="checkbox"/>	GE, HI
	Moisture content	DIN 52183 (11.77)	<input checked="" type="checkbox"/>	GE, HI, PI

6.2	Heavy metals	Annex IV No. 1.4.3 AltholzV		
	Aqua regia digestion	E DIN EN 13657 (10.99)	<input checked="" type="checkbox"/>	HI, PI
		DIN EN 13657 (01.03)	<input checked="" type="checkbox"/>	HI, PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 60 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Arsenic (from aqua regia digestion)	DIN EN ISO 11969 (11.96)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17294– 2 (01.17)	<input checked="" type="checkbox"/>	PI
Lead (from aqua regia digestion)	DIN 38406– 6 (07.98)	<input type="checkbox"/>	
	DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
	DIN ISO 11047 (05.98)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 17294– 2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
Cadmium (from aqua regia digestion)	DIN EN ISO 5961 (05.95)	<input type="checkbox"/>	
	DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
	DIN ISO 11047 (06.95)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
Chromium (from aqua regia digestion)	DIN EN 1233 (08.96)	<input type="checkbox"/>	
	DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
	DIN ISO 11047 (06.95)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 61 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

Copper (from aqua regia digestion)	DIN 38406– 7 (09.91)	<input type="checkbox"/>	
	DIN EN ISO 11885 (04.98)	<input type="checkbox"/>	
	DIN ISO 11047 (06.95)	<input type="checkbox"/>	
	DIN ISO 11047 (05.03)	<input type="checkbox"/>	
	DIN EN ISO 17294–2 (01.17)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 11885 (09.09)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 22036 (06.09)	<input checked="" type="checkbox"/>	PI
Mercury (from aqua regia digestion)	DIN EN 1483 (08.97)	<input type="checkbox"/>	
	DIN EN ISO 12338 (10.98)	<input type="checkbox"/>	
	DIN EN ISO 12846 (08.12)	<input checked="" type="checkbox"/>	PI
	DIN EN ISO 17852 (04.08)	<input type="checkbox"/>	

6.3	Halogens	Annex IV No. 1.4.2 AltholzV		
Fluorine, chlorine	DIN 51727 (06.01)	<input checked="" type="checkbox"/>	HE	
	DIN 51727 (11.11)	<input checked="" type="checkbox"/>	HE	
	DIN EN 14582 (06.07) in conjunction with DIN EN ISO 10304– 1 (04.95)	<input checked="" type="checkbox"/>	HE	
	DIN EN ISO 10304– 1 (07.09)	<input checked="" type="checkbox"/>	HE	
6.4	Organic parameters	Annex IV No. 1.4.4 and 1.4.5 AltholzV		
Pentachlorophenol (PCP)	Annex IV AltholzV, No. 1.4.4	<input checked="" type="checkbox"/>	GE	
	DIN ISO 14154 (12.05)	<input checked="" type="checkbox"/>	GE	
Polychlorinated biphenyls (PCB)	Annex IV AltholzV, No. 1.4.5 in conjunction with DIN 38414– 20 (01.96)	<input checked="" type="checkbox"/>	GE	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 62 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

7 Sampling, sample preparation and analysis of waste in accordance with the German Landfill Ordinance, Annex 4 (July 2020)

DepV, Annex 4	Parameter	Section 8 (1), (3) and (5) DepV		Location
2	Sampling	LAGA PN 98 (May 2019)	<input checked="" type="checkbox"/>	
3	Determination of total content in solid and elutable fraction			
3.1	Determination of total content in solid			
3.1.1	Sample preparation	DIN 19747 (July 2009)	<input checked="" type="checkbox"/>	
3.1.2	Digestion method (aqua regia)	DIN EN 13657 (January 2003)	<input checked="" type="checkbox"/>	
3.1.3	Organic portion of the dry residue of the original substance			
3.1.3.1	Loss on ignition	DIN EN 15169 (May 2007)	<input checked="" type="checkbox"/>	
3.1.3.2	TOC (total organic carbon)	DIN EN 15936 (November 2012)	<input checked="" type="checkbox"/>	
3.1.4	BTEX (benzene, toluene, ethylbenzene, o, m, p-xylene, styrene, cumene)	DIN EN ISO 22155 (July 2016)	<input checked="" type="checkbox"/>	
3.1.5	PCB (polychlorinated biphenyls – Sum of the 7 PCB congeners, PCB 28, 52, 101, 118, 138, 153, 180)	DIN EN 15308 (December 2016)	<input checked="" type="checkbox"/>	
3.1.6	Petroleum hydrocarbons (C 10 to C 40)	DIN EN 14039 (January 2005) in conjunction with LAGA KW/04 (September 2019)	<input checked="" type="checkbox"/>	
3.1.7	PAH (polycyclic aromatic hydrocarbons)	DIN ISO 18287 (May 2006)	<input checked="" type="checkbox"/>	
3.1.8	Density	DIN 18125-2 (March 2011)	<input checked="" type="checkbox"/>	
3.1.9	Gross calorific value	DIN EN 15170 (May 2009)	<input checked="" type="checkbox"/>	
3.1.10	Cadmium, chromium, copper, nickel, lead, zinc	DIN EN ISO 17294-2 (January 2017)	<input checked="" type="checkbox"/>	
		DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DepV, Annex 4	Parameter	Section 8 (1), (3) and (5) DepV		Location
3.1.11	Mercury	DIN EN ISO 12846 (E 12) (August 2012)	<input checked="" type="checkbox"/>	
		DIN EN ISO 17852 (E 35) (April 2008)	<input type="checkbox"/>	
3.1.12	Extractable lipophilic substances	LAGA KW/04 (September 2019)	<input checked="" type="checkbox"/>	
3.2	Determination of contents in eluate			
3.2.1	Eluate preparation			
3.2.1.1	Eluate preparation with liquid/solid ratio 10/1	DIN EN 12457-4 (January 2003)	<input checked="" type="checkbox"/>	
3.2.1.2	Eluate preparation each with constant pH 4 and 11 / acid neutralisation capacity	LAGA Guideline EW 98 (September 2017)	<input checked="" type="checkbox"/>	
3.2.2	Up-flow percolation test	DIN 19528 (January 2009)	<input checked="" type="checkbox"/>	FG,
		DIN EN 14405 (May 2017)	<input type="checkbox"/>	
3.2.3	pH value of eluate	DIN EN ISO 10523 (April 2012)	<input checked="" type="checkbox"/>	
3.2.4	DOC (dissolved organic carbon)			
3.2.4.1	DOC	DIN EN 1484 (April 2019)	<input checked="" type="checkbox"/>	
3.2.4.2	DOC at a pH between 7.5 and 8	LAGA Guideline EW 98 (September 2017)	<input type="checkbox"/>	
3.2.5	Phenols	DIN 38409-H 16 (June 1984)	<input type="checkbox"/>	
		DIN EN ISO 14402 (H 37) (December 1999)	<input checked="" type="checkbox"/>	
3.2.6	Arsenic	DIN EN ISO 17294-2 (January 2017)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
		DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
3.2.7	Lead	DIN EN ISO 17294-2, (January 2017)	<input checked="" type="checkbox"/>	
		DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	

Valid from: 13.01.2023

Date of issue: 25.07.2023

DepV, Annex 4	Parameter	Section 8 (1), (3) and (5) DepV		Location
3.2.8	Cadmium	DIN EN ISO 17294-2, (January 2017)	<input checked="" type="checkbox"/>	
		DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
3.2.9	Copper	DIN EN ISO 17294-2, (January 2017)	<input checked="" type="checkbox"/>	
		DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
3.2.10	Nickel	DIN EN ISO 17294-2, (January 2017)	<input checked="" type="checkbox"/>	
		DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
3.2.11	Mercury	DIN EN ISO 12846 (E 12) (August 2012)	<input checked="" type="checkbox"/>	
		DIN EN ISO 17852 (E 35) (April 2008)	<input type="checkbox"/>	
3.2.12	Zinc	DIN EN ISO 17294-2, (January 2017)	<input checked="" type="checkbox"/>	
		DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
3.2.13	Chloride	DIN EN ISO 10304-1 (D 20) (July 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 15682 (D 31) (January 2002)	<input type="checkbox"/>	
3.2.14	Sulphate	DIN EN ISO 10304-1 (D 20) (July 2009)	<input checked="" type="checkbox"/>	

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DepV, Annex 4	Parameter	Section 8 (1), (3) and (5) DepV		Location
3.2.15	Cyanide, readily liberated	DIN 38405–D 13 (April 2011)	<input type="checkbox"/>	
		In waste containing sulphide: DIN ISO 17380 (May 2006)	<input checked="" type="checkbox"/>	
		DIN EN ISO 14403–1 (D 2) (October 2012)	<input type="checkbox"/>	
		DIN EN ISO 14403–2, (October 2012)	<input checked="" type="checkbox"/>	GE,
3.2.16	Fluoride	DIN 38405–D 4 (July 1985)	<input checked="" type="checkbox"/>	
		DIN EN ISO 10304–1 (D 20) (July 2009)	<input checked="" type="checkbox"/>	
3.2.17	Barium	DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 17294–2 (E 29) (January 2017)	<input checked="" type="checkbox"/>	
3.2.18	Chromium, total	DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 17294–2 (January 2017)	<input checked="" type="checkbox"/>	
3.2.19	Molybdenum	DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 17294–2 (E 29) (January 2017)	<input checked="" type="checkbox"/>	
3.2.20	Antimony	DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
		DIN 38405–D 32 (May 2000)	<input type="checkbox"/>	
		DIN EN ISO 17294–2 (E 29) (January 2017)	<input checked="" type="checkbox"/>	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 66 of 68

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

Annex to the Partial Accreditation Certificate D-PL-14170-01-03

DepV, Annex 4	Parameter	Section 8 (1), (3) and (5) DepV		Location
3.2.21	Selenium	DIN ISO 22036 (June 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 11885 (E 22) (September 2009)	<input checked="" type="checkbox"/>	
		DIN EN ISO 17294-2 (E 29) (January 2017)	<input checked="" type="checkbox"/>	
3.2.22	Total dissolved solids	DIN EN 15216 (January 2008)	<input checked="" type="checkbox"/>	
		DIN 38409-H 1 (January 1987)	<input checked="" type="checkbox"/>	
		DIN 38409-H 2 (March 1987)	<input checked="" type="checkbox"/>	
3.2.23	Conductivity of eluate	DIN EN 27888 (C 8) (November 1993)	<input checked="" type="checkbox"/>	
3.2.24	Determination of dry residue	DIN EN 14346 (March 2007)	<input checked="" type="checkbox"/>	
3.3	Biodegradability of the dry residue of the original substance			
3.3.1	Breathability over 4 days (AT ₄)		<input checked="" type="checkbox"/>	
3.3.2	Gas formation rate in fermentation test over 21 days (GB ₂₁)		<input checked="" type="checkbox"/>	

Valid from: 13.01.2023

Date of issue: 25.07.2023

Page 67 of 68

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

Abbreviations used

AbfKlärV	German Sewage Sludge Ordinance
AltholzV	German Waste Wood Ordinance
AltöIV	German Waste Oil Regulation
ASU	Amtliche Sammlung von Untersuchungsverfahren (Official Collection of Test Methods)
BBodSchV	Federal Soil Protection and Contaminated Sites Ordinance
BioAbfV	German Biowaste Ordinance
BGK	Bundesgütegemeinschaft Kompost e.V. (Federal Compost Quality Association)
CEN/TS	European Committee for Standardization / Technical Specifications
DIN	Deutsches Institut für Normung e.V. (German Institute for Standardization)
DIN SPEC	A kind of prestandard (SPEC for specification)
DepV	German Landfill Ordinance
EN	European standard
ST-MA-M xx-yyy	In-house method of GBA Gesellschaft für Bioanalytik mbH
HLUG	Hessisches Landesamt für Umwelt und Geologie (Hessian Agency for Nature Conservation, Environment and Geology)
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
LAGA	Bund/Länder-Arbeitsgemeinschaft Abfall (Federal/Regional Working Group on Waste)
LUA	State Environment Agency
SenUVK Berlin	Senate Department for the Environment, Transport and Climate Protection, Berlin
VDI	Verein deutscher Ingenieure (Association of German Engineers)
VDLUFA	Verband deutscher landwirtschaftlicher Untersuchungs- und Forschungsanstalten (Association of German Agricultural Testing and Research Institutions)