Deutsche Akkreditierungsstelle

# Annex to the Partial Accreditation Certificate D-PL-14629-01-06 according to DIN EN ISO/IEC 17025:2018

**Valid from:** **02.04.2024**

Date of issue: 02.04.2024

This annex is a part of the accreditation certificate D-PL-14629-01-00.

Holder of partial accreditation certificate:

**Eurofins GfA Lab Service GmbH**
**Neuländer Kamp 1a, 21079 Hamburg**

with the location

**Eurofins GfA Lab Service GmbH**
**Neuländer Gewerbepark 4, 21079 Hamburg**

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

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

Tests in the fields:

**Determination of organic residues and contaminants using GC/MS, -MS/MS, -HRMS and LC-MS/MS in air/emissions, ambient air and dust, including sample preparation;**
**Immission protection module**

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

**Within the given testing field marked with ** the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the modification, development and refinement of testing methods. The listed testing methods are exemplary.**

**Within the scope of accreditation marked with *** the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use the standards or equivalent testing methods listed here with different issue dates.**

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

## 1 Determination of organic pollutants using isotope dilution analysis and gas chromatography with mass spectrometric detection (MS, MS/MS and HRMS) in air/emsission, ambient air and dust **

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| DIN ISO 12884<br>2000-12 | Ambient air - Determination of total (gas and particle phase) polycyclic aromatic hydrocarbons - Collection on sorbent-backed filters with gas chromatographic/mass spectrometric analysis<br>(restriction: *no sampling*) |
| DIN ISO 16000-13<br>2010-03 | Indoor air - Part 13: Determination of total (gas and particle-phase) polychlorinated dioxin-like biphenyls (PCBs) and polychlorinated dibenzo-p-dioxins/dibenzofurans (PCDDs/PCDFs) - Collection on sorbent-backed filters<br>(restriction: *no sampling*) |
| DIN ISO 16000-14<br>2012-03 | Indoor air - Part 14: Determination of total (gas and particle-phase) polychlorinated dioxin-like biphenyls (PCBs) and polychlorinated dibenzo-p-dioxins/dibenzofurans (PCDDs/PCDFs) - Extraction, clean-up and analysis by high-resolution gas chromatography and mass spectrometry<br>(restriction: *no sampling*) |
| DIN EN 15549<br>2008-06 | Air quality - Standard method for the measurement of the concentration of benzo[a]pyrene in ambient air<br>(restriction: *no sampling*) |
| VDI 3498 Blatt 2<br>2002-07 | Ambient air measurement - Indoor air measurement - Measurement of polychlorinated dibenzo-p-dioxins and dibenzofurans; Method using small filters<br>(restriction: *no sampling*) |

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| VDI 3499 Blatt 1<br>2003-07 | Emission measurement - Determination of polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs) - Dilution method; Example of application of DIN EN 1948 for the concentration range < 0,1 ng I-TEQ/m3 and supplement to DIN EN 1948 for the concentration range > 0,1 ng I-TEQ/m3; Determination in filter dust, ash and slag<br>(restriction: *no sampling*) |
| BIA 6880<br>1993-06 | BIA-testing method for the determination of concentration of polychlorinated dibenzofuranes and dibenzodioxins (PCDF/PCDD) and polybrominated dibenzofuranes and dibenzo-p-dioxins (PBDF/PBDD) at working areas<br>(restriction: *no sampling*) |
| GLS DF 140<br>2022-11 | Determination of polychlorinated dibenzodioxins (PCDD), polychlorinated dibenzofuranes (PCDF) and polychlorinated biphenyls (PCB) in air samples by gas chromatography with mass spectrometric detection |
| GLS DF 150<br>2022-11 | Determination of polybrominated dibenzodioxins (PBDD) and polybrominated dibenzofurans (PBDF) in air samples by gas chromatography with mass spectrometric detection |
| GLS OC 110<br>2023-09 | Determination of polychlorinated benzenes (PCBz) in solids, emissions, immissions and air samples by gas chromatography with mass spectrometric detection |
| GLS OC 200<br>2023-02 | Determination of polybrominated diphenyl ether (PBDE) and polybrominated biphenyles (PBB) in diverse sample matrices by gas chromatography with mass spectrometric detection<br>(Scope here: *air*) |
| GLS OC 230<br>2023-09 | Determination of the mass concentration of short and middle chain C10-C17 Chlorparaffines (SCCP, MCCP) in diverse sample matrices by GC-MS<br>(Scope here: *air*) |

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| GLS OC 300<br>2023-09 | Determination of polycyclic aromatic hydrocarbons (PAH) in diverse sample matrices by gas chromatography with mass spectrometric detection<br>(Scope here: *air-samples and filter dust*) |
| GLS OC 720<br>2023-09 | Determination of alkyl phenoles in diverse sample matrices by gas chromatography with mass spectrometric detection<br>(Scope here: *air-samples*) |

## 2 Determination of organic pollutants using isotope dilution analysis and high performance liquid chromatography with mass spectrometric detection (LC-MS/MS) in air/emsission, ambient air and dust **

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| GLS OC 260<br>2019-01 | Determination of the mass concentration of hexabromocyclododecane (HBCD) in diverse sample matrices by LC-MS/MS<br>(Scope here: *air/emsission, ambient air and dust*) |
| GLS OC 400<br>2019-01 | Determination of per- and polyfluorinated compounds (PFAS) in diverse sample matrices by LC-MS/MS<br>(Scope here: *air*) |

## 3 Sample prepartion ***

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| DIN 19747<br>2009-07 | Investigation of solids-pretreatment, preparation and processing of samples for chemical, biological and physical investigations |

## 4 Test method for the pollution control module and annex A2 of VDI 4220

| Test range / identification | Group I.1: Determination of emissions<br>Field of activity Sa: Special sampling of substances that require special effort / activities during sampling or analysis | | | | |
|---|---|---|---|---|---|
| Component | Standard / Directive / technical rule | | SRM | QM-document | Comment Site |
| | Title | Designation | | | |
| PCDD/PCDF | Stationary source emissions - Determination of the mass concentration of PCDDs/PCDFs and dioxin-like PCBs - Part 2: Extraction and clean-up of PCDDs/PCDFs Part 3: Identification and quantification of PCDDs/PCDFs | DIN EN 1948 Part 2-3 2006-06 | ☒ | GLS DF 140 | |
| PCDD/PCDF | Emission measurement - Determination of polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs) - Dilution method; Example of application of DIN EN 1948 for the concentration range < 0,1 ng I-TEQ/$m^3$ and supplement to DIN EN 1948 for the concentration range > 0,1 ng I-TEQ/$m^3$; Determination in filter dust, ash and slag | VDI 3499 sheet 1 2003-07 | | GLS DF 140 | |
| PCDD/PCDF | Emission measurement - Determination of polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs) - Filter/condenser method; Example of application of DIN EN 1948 for the concentration range < 0,1 ng I-TEQ/$m^3$ and supplement to DIN EN 1948 for the concentration range > 0,1 ng I-TEQ/$m^3$ | VDI 3499 sheet 2 2004-02 | | GLS DF 140 | |
| PCDD/PCDF | Emission measurement - Determination of polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs) - Cooled probe method; Example of application of DIN EN 1948 for the concentration range < 0,1 ng I-TEQ/$m^3$ and supplement to DIN EN 1948 for the concentration range > 0,1 ng I-TEQ/$m^3$ | VDI 3499 sheet 3 2004-02 | | GLS DF 140 | |

| Test range / identification | Group I.1: Determination of emissions<br>Field of activity Sa: Special sampling of substances that require special effort / activities during sampling or analysis | | | | |
|---|---|---|---|---|---|
| Component | Standard / Directive / technical rule | | SRM | QM-document | Comment Site |
| | Title | Designation | | | |
| dl-PCB | Stationary source emissions - Determination of the mass concentration of PCDDs/PCDFs and dioxin-like PCBs - Part 4: Sampling and analysis of dioxin-like PCBs; German version EN 1948-4:2010 | DIN EN 1948-4 2014-03 | | GLS DF 140 | |
| PCDD/PCDF and PCB | Stationary source emissions - Determination of the mass concentration of PCDDs/PCDFs and dioxin-like PCBs - Part 5: Long-term sampling of PCDDs/PCDFs and PCBs | DIN CEN/TS 1948-5 2015-06 | | GLS DF 140 | |
| PAH | Stationary source emissions - Determination of gas and particle-phase polycyclic aromatic hydrocarbons - Part 2: Sample preparation, clean-up and determination | ISO 11338-2 2003-06 | | GLS OC 300 | |
| PAH | Stationary source emissions - Determination of polycyclic aromatic hydrocarbons (PAH) - GC/MC method | VDI 3874 2006-12 | | GLS OC 300 | |
| PCBz | Ambient air measurement - Indoor air measurement - Measurement of persistent organic pollutants (POPs) with GC/HRMS | VDI 2464 sheet 4 2015-06 | | GLS OC 110 | |

| Testing area / Identifier | Group IV: Determination of ambient air<br>Task area Sa: Special analysis of substances which require specific conditions in sampling or analysis | | | | |
|---|---|---|---|---|---|
| Component | Standard / Directive / technical rule | | | SRM | QM-document |
| | Title | Designation | | | |
| PCDD/PCDF | Ambient air measurement - Indoor air measurement - Measurement of polychlorinated dibenzo-p-dioxins and dibenzofurans; Method using large filters | VDI 3498 sheet 1 2002-07 | ☒ | GLS DF 140 | |
| PCDD/PCDF | Ambient air measurement - Indoor air measurement - Measurement of polychlorinated dibenzo-p-dioxins and dibenzofurans; Method using small filters | VDI 3498 sheet 2 2002-07 | ☒ | GLS DF 140 | |

| Testing area / Identifier | Group IV: Determination of ambient air<br>Task area Sa: Special analysis of substances which require specific conditions in sampling or analysis | | | | |
|---|---|---|---|---|---|
| Component | Standard / Directive / technical rule | | | SRM | QM-document |
| | Title | Designation | | | |
| PCDD/PCDF | Ambient air measurement - Deposition measurement of low volatile organic compounds - Determination of PCDD/F deposition; Bergerhoff sampling device and GC/HRMS analysis | VDI 2090 sheet 1 2001-01 | | GLS DF 140 | |
| PCDD/PCDF | Ambient air measurement - Deposition measurement of low volatile organic compounds - Determination of PCDD/F-deposition; Funnel adsorber sampling and GC/HRMS-analysis | VDI 2090 sheet 2 2002-12 | | GLS DF 140 | |
| PCDD/PCDF | Stationary source emissions - Determination of the mass concentration of PCDDs/PCDFs and dioxin-like PCBs - Part 2: Extraction and clean-up of PCDDs/PCDFs Part 3: Identification and quantification of PCDDs/PCDFs | DIN EN 1948 Part 2-3 2006-06 | | GLS DF 140 | |
| PCB | Ambient air measurement - Indoor air measurement - Measurement of polychlorinated biphynyls (PCBs) - GC/MS method for PCB 28, 52, 101,138, 153, 180 | VDI 2464 sheet 1 2009-09 | | GLS DF 140 | |
| PCB | Ambient air measurement - Indoor air measurement - Measurement of polychlorinated biphenyls (PCBs) - HR-GC/HR-MS method for coplanar PCBs | VDI 2464 sheet 2 2009-09 | | GLS DF 140 | |
| PAH | Ambient air - Determination of total (gas and particle phase) polycyclic aromatic hydrocarbons - Collection on sorbent-backed filters with gas chromatographic/mass spectrometric analysis | DIN ISO 12884 2000-12 | | GLS OC 300 | |
| Benzo[a]pyrene | Air quality - Standard method for the measurement of the concentration of benzo[a]pyrene in ambient air | DIN EN 15549 2008-06 | | GLS OC 300 | |
| PCBz | Ambient air measurement - Indoor air measurement - Measurement of persistent organic pollutants (POPs) with GC/HRMS | VDI 2464 sheet 4 2019-07 | | GLS OC 110 | |

**Abbreviations used:**

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| BIA | methods published by the Federal Institut for Health and Safety at Work (IFA) |
| CEN | Comité Européen de Normalisation |
| DIN | Deutsches Institut für Normung e. V. |
| EN | European Standard |
| GLS DF xxx | in-house-methode of Eurofins GfA Lab Service GmbH from PCDD/F-Analytics |
| GLS OC xxx | in-house-method of Eurofins GfA Lab Service GmbH from Organic Chemistry |
| IEC | International Electrotechnical Commission |
| ISO | International Organization for Standardization |
| SRM | Standard reference method |
| VDI | Verein Deutscher Ingenieure (Association of German Engineers) |