Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-14170-01-04 according to DIN EN ISO/IEC 17025:2018

Valid from: **16.03.2023**

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 indoor air
Microbiological analysis of environmental samples
Sampling of selected organic gaseous air constituents
Determination (sampling and analysis) of fibrous particles in indoor environments and solids
Determination (sampling and analysis) of moulds in indoor environments, material samples and on surfaces

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.

at the locations

Stätzlinger Str. 70, 86165 Augsburg [1)]
Magnusstraße 11, 12489 Berlin
Bruchstraße 5c, 45883 Gelsenkirchen
Daimlerring 37, 31135 Hildesheim
Schelsenweg 24 a, 41238 Mönchengladbach
Mülforter Str. 59, 41238 Mönchengladbach[1)]
Flensburger Straße 15, 25421 Pinneberg
Hamburger Straße 31, 21224 Rosengarten[1)]

[1)]No conformity assessment activities are carried out at these locations. These locations are used to store equipment for sampling or as office space.

Table of contents

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

B = Berlin
GE = Gelsenkirchen
HE = Herten
HI = Hildesheim
MG = Mönchengladbach: Schelsenweg 24a
PI = Pinneberg

The testing laboratory is 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.**

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

1 Air

1.1 Sampling of air

For the sampling part of the indoor air tests listed below, the requirements of the sampling strategy DIN EN 16000-1: 2006-06 (general requirements);
-5: 2007-5 (VOC); -7: 2007-11 (asbestos fibres) in their respective versions are fulfilled. (MG)

DIN EN ISO 16000-3 2013-01	Indoor air – Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and in test chambers – Pumped sampling (Restriction: *Here only sampling*)	MG
DIN ISO 16000-6 2012-11	Indoor air – Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA® sorbent, thermal desorption and gas chromatography using MS or MS-FID (Restriction: *MG sampling only*)	MG
PCB-Directive NRW 1996-06	Sampling for polychlorinated biphenyls (PCBs) on Florisil	MG

1.2 Gas chromatography of organic compounds

1.2.1 Gas chromatography with conventional detectors (GC-FID, GC-ECD) *

In-house method HI-MA-M 03-020 # U 2021-08	Volatile alkanes C1-C4 in air with HS-GC-FID	HI

1.2.2 Gas chromatography 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: *Matrix here air*)	HI
DIN 38413-P 2 1988-05	Determination of vinyl chloride (chloroethene) by headspace gas chromatography	HI

DIN ISO 16000-6 2012-11	Indoor air – Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA® sorbent, thermal desorption and gas chromatography using MS or MS-FID (Restriction: *Without sampling*)	GE
DIN EN ISO 16017-1 2001-10	Indoor, ambient and workplace air – Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography – Part 1: Sampling with a pump (Restriction: *Without sampling*)	GE
EPA TO-17 1999-01	Determination of Volatile Organic Compounds in Ambient Air Using Active Sampling Onto Sorbent Tubes (Restriction: *Without sampling*)	GE
In-house method HI-MA-M 03-025 # U 2021-10	VOC, BTEX, C3 aromatics in air with HS-GC-MS	HI

2 Diffusive samplers and adsorbents

2.1 Liquid chromatography with conventional detectors (HPLC-DAD) (*: PI)

DIN ISO 16000-3 2013-01	Indoor air – Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and in test chambers – Pumped sampling (Restriction: *Without sampling*)	PI
DIN ISO 16000-4 2012-11	Indoor air – Part 4: Determination of formaldehyde – Diffusive sampling method (Restriction: *Without sampling*)	PI

2.2 Gas chromatography with mass selective detectors (GC-MS, GC-MS/MS) (*: PI)

DIN 38407-F 9 1991-05	Determination of benzene and some of its derivatives by gas chromatography (Modification: *Additionally aliphatics C5-C10, diethylbenzenes*)	PI

DIN ISO 12884 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 (Restriction: *Without sampling;* Modification: *Additional adsorbent Florisil*)	PI
DIN ISO 16000-6 2012-11	Indoor air – Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA® sorbent, thermal desorption and gas chromatography using MS or MS-FID (Restriction: *Without sampling*)	GE
DIN EN ISO 16017-1 2001-10	Indoor, ambient and workplace air – Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography – Part 1: Sampling with a pump (Restriction: *Without sampling*)	GE
VDI 2100 Blatt 2 2010-11	Determination of gaseous compounds in ambient air – Determination of indoor air pollutants – Gas chromatographic determination of organic compounds – Active sampling by enrichment on activated carbon – Solvent extraction (Restriction: *Without sampling*)	PI
VDI 2464 Blatt 1 2009-09	Ambient air measurement – Indoor air measurement – Measurement of polychlorinated biphenyls (PCBs) – GC/MS method for PCB 28, 52, 101,138, 153, 180 (Restriction: *Without sampling;* Modification: *Additional adsorbents Florisil and XAD*)	PI
VDI 3865 Blatt 3 1998-06	Measurement of organic soil pollutants – Gas-chromatographic determination of volatile organic compounds in soil gas adsorption at activated carbon and desorption with organic solvents (Restriction: *Without sampling*) (Modification: *Also indoor air and material samples, additionally analytes*)	PI
EPA TO-17 1999-01	Determination of Volatile Organic Compounds in Ambient Air Using Active Sampling Onto Sorbent Tubes (Restriction: *Without sampling*)	GE

In-house method PI-MA-M 03-093 2022-03	Tributyltin using GC-MS/MS in diffusive samplers and adsorbed materials	PI

3 Analysis of fibrous particles

3.1 Sampling of material, surface, air and filter samples for the analysis of fibrous hazardous substances

VDI 3492 2013-06	Indoor air measurement – Ambient air measurement – Measurement of inorganic fibrous particles – Scanning electron microscopy method (Restriction: *Here only sampling*)	B, MG
VDI 3866 Blatt 1 2000-12	Determination of asbestos in technical products – Principle – Sampling and sample preparation	B, MG
VDI 3877 Blatt 1 2011-09	Indoor air pollution – Measurement of fibrous dust settled on surfaces – Sampling and analysis (REM/EDXA) (Restriction: *Here only sampling*)	B, MG

3.2 Analysis of material, surface, air and filter samples for fibrous hazardous substances by scanning electron microscopy (*MG)

ISO 22262-1 2012-07	Air quality – Bulk materials – Part 1: Sampling and qualitative determination of asbestos in commercial bulk materials	B, MG
ISO 14966 2019-12	Ambient air – Determination of numerical concentration of inorganic fibrous particles – Scanning electron microscopy method	B, MG
VDI 3492 2013-06	Indoor air measurement – Ambient air measurement – Measurement of inorganic fibrous particles – Scanning electron microscopy method	B, MG
VDI 3866 Blatt 5 2017-06	Determination of asbestos in technical products – Scanning electron microscopy method	B, MG
VDI 3877 Blatt 1 2011-09	Indoor air pollution – Measurement of fibrous dust settled on surfaces – Sampling and analysis (REM/EDXA)	B, MG

IFA (BIA) Workbook No. 7487 1997-04	Method for analytical determination of low mass contents of asbestos fibres in powders and dusts with REM/EDX	B, MG
VDI 3876 2018-11	Measurement of asbestos in construction and demolition waste and recycling materials produced thereof – Sample preparation and analysis	MG

4 Analysis of moulds and bacteria

4.1 Sampling of material, surface, air samples for the analysis of moulds and bacteria

DIN EN ISO 16000-18 2012-01	Indoor air – Part 18: Detection and enumeration of moulds – Sampling by impaction	MG
DIN ISO 16000-21 2014-05	Indoor air – Part 21: Detection and enumeration of moulds – Sampling of materials	MG
WTA Data Sheet 4-12 2021-05	Goals and control of treatments of internal mould fungus damage (Restriction: *Here only sampling sections 3.2.1 and 3.2.2*)	MG
In-house method MA-M 20-029 2021-09	Sampling of moulds	MG

4.2 Cultural microbiological analysis of material, surface and air samples for moulds and bacteria *

DIN ISO 16000-17 2010-06	Indoor air – Part 17: Detection and enumeration of moulds – Culture-based method	MG
VDI 6022 Blatt 1 Section 8.3 2018-01	Ventilation and indoor-air quality – Hygiene requirements for ventilation and air-conditioning systems and units (VDI Ventilation Code of Practice) – Section 8.3: Microbiological analysis of surfaces (Restriction: *Microbiological analysis only*)	MG

4.3 Visual, microbiological analysis of material, surface and air samples for moulds and bacteria *

DIN EN ISO 16000-20 2015-11	Indoor air – Part 20: Detection and enumeration of moulds – Determination of total spore count	MG
In-house method MG-MA-M 21-006 2021-11	Analysis of unicellular organisms	MG
In-house method MG-MA-M 21-007 2021-10	Microscopic examination of moulds using adhesive film preparations	MG

Abbreviations used

DIN	Deutsches Institut für Normung e.V. (German Institute for Standardization)
EN	European standard
In-house method ST-MA-M xx-yyy	In-house method of GBA Gesellschaft für Bioanalytik mbH
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
VDI	Verein deutscher Ingenieure (Association of German Engineers)