Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-17740-01-05 according to DIN EN ISO/IEC 17025:2018

Valid from: **17.05.2024**

Date of issue: 17.05.2024

This annex is a part of the accreditation certificate D-PL-17740-01-00.

Holder of partial accreditation certificate:

Laborunion Prof. Höll & Co. GmbH
Lindenstraße 24, 08645 Bad Elster

with the location

Laborunion Prof. Höll & Co. GmbH
Elsteraue 4, 08626 Adorf

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:

Sampling as well as physical, physico-chemical and selected microbiological analysis of liquid carbon dioxide and technical gases

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.

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.

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

Sampling as well as physical, physico-chemical and selected microbiological analysis of liquid carbon dioxide and technical gases

ISBT Procedure 2.0 2019-10	Determination of the purity of carbon dioxide
ISBT Procedure 3.0 2019-10	Determination of the water content of carbon dioxide
ISBT Procedure 4.0N 2015-03	Determination of the water content of nitrogen
ISBT Procedure 6.0 2019-10	Determination of ammonia in carbon dioxide
ISBT Procedure 7.0 2019-10	Determination of nitrogen oxides in carbon dioxide
ISBT Procedure 7.1 2019-10	Determination of nitrogen dioxide in carbon dioxide
ISBT Procedure 7.2 2019-10	Determination of nitrogen monoxide in carbon dioxide
ISBT Procedure 7.0N 2015-03	Evaluation of the smell of nitrogen
ISBT Procedure 15.0 2019-10	Evaluation of the appearance and smell of solid carbon dioxide (snow sample)
ISBT Procedure 16.0 2019-10	Evaluation of the appearance, smell and taste of carbon dioxide in water
ISBT Procedure 17.0 2019-10	Determination of hydrogen cyanide in carbon dioxide

ISBT Procedure 19.0 2019-10	Determination of phosphine in carbon dioxide
HV-LU 24 2020-02	Determination of volatile hydrocarbons and permanent gases in carbon dioxide and other technical gases by gas chromatography with helium ionisation detection and flame ionisation detection
HV-LU 45 2020-01	Gravimetric determination of non-volatile residues and particles in carbon dioxide and other technical gases
HV-LU 47 2019-06	Determination of aldehydes in carbon dioxide by HPLC with UV detection after solid phase extraction
HV-LU 49 2020-02	Determination of volatile inorganic sulphur compounds and methyl mercaptan in carbon dioxide and other technical gases by gas chromatography with sulphur chemiluminescence detection
HV-LU 51 2021-12	Determination of 15 polycyclic aromatic hydrocarbons (PAHs) in carbon dioxide and other technical gases by HPLC with fluorescence or UV detection after liquid-liquid extraction
HV-LU 57 2019-07	Determination of volatile halogenated hydrocarbons in carbon dioxide and other technical gases by gas chromatography with electron capture detection (GC/ECD)
HV-LU 58 2021-03	Determination of volatile halogenated hydrocarbons, benzene and some derivatives in carbon dioxide by headspace gas chromatography with mass spectrometric detection
HV-LU 59 2018-07	Determination of organic solvents in carbon dioxide by headspace gas chromatography with flame ionisation detection
HV-LU 63 2018-07	Determination of ethylene oxide in carbon dioxide and other technical gases by gas chromatography with flame ionisation detection (GC/FID)
HV-LU 65 2019-06	Determination of sulphides and mercaptans in carbon dioxide and other technical gases by gas chromatography with sulphur chemiluminescence detection

HV-LU 70 2024-01	Determination of selected microbiological parameters in carbon dioxide
HV-LU 115 2019-06	Determination of non-volatile organic residues in carbon dioxide by gas chromatography with mass spectrometric detection
HV-LU 135 2019-12	Sampling of liquid and gaseous carbon dioxide
HV-LU 136 2019-06	Determination of phenols in liquid carbon dioxide by HPLC and UV detection

Abbreviations used:

DIN	Deutsches Institut für Normung e. V. (German Institute for Standardization)
EN	European standard
HV-LU xxx:	In-house method of Laborunion Prof. Höll & Co. GmbH
IEC	International Electrotechnical Commission
ISBT	International Society of Beverage Technologists
ISO	International Organization for Standardization