

**The Appendix is an integral part of
Certificate of Accreditation No. 493/2022 of 20/10/2022**

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Linde Gas a.s.
Laboratory for Special Gases
U Trati 1324, Kyje, 198 00, Praha 9

CMC for the field of measured quantity: Amount of substance

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work-place
		Min.	unit	max.	unit					
1	Amount of substance concentration of CH ₄	0.00005 mol/mol		to	0.003 mol/mol		1.3 %	Comparison with a standard	PP4.01.041-HP-FID20 ⁴	
2	Amount of substance concentration of CH ₄	0.003 mol/mol		to	0.5 mol/mol		0.42 %	Comparison with a standard	PP4.01.020-TESTII40 ⁴	
3	Amount of substance concentration of C ₃ H ₈	0.00005 mol/mol		to	0.03 mol/mol		1.3 %	Comparison with a standard	PP4.01.041-HP-FID30 ⁴	
4	Amount of substance concentration of CO	0.00005 mol/mol		to	0.005 mol/mol		0.40 %	Comparison with a standard	PP4.01.037-CO/CH ₁ ⁵	
5	Amount of substance concentration of CO	0.005 mol/mol		to	0.22 mol/mol		0.66 %	Comparison with a standard	PP4.01.038-CO/CH ₂ ⁵	
6	Amount of substance concentration of CO ₂	0.0004 mol/mol		to	0.004 mol/mol		0.66 %	Comparison with a standard	PP4.01.037-CO ₂ /CH ₁ ⁵	
7	Amount of substance concentration of CO ₂	0.0039 mol/mol		to	0.26 mol/mol		0.66 %	Comparison with a standard	PP4.01.038-CO ₂ /CH ₂ ⁵	
8	Amount of substance concentration of CO ₂	0.01 mol/mol		to	0.26 mol/mol		0.54 %	Comparison with a standard	PP4.01.020-TESTII 21 ⁴	
9	Amount of substance concentration of H ₂	0.02 mol/mol		to	0.20 mol/mol		0.42 %	Comparison with a standard	PP4.01.020-TESTII 61 ⁴	
10	Amount of substance concentration of O ₂	0.00025 mol/mol		to	0.004 mol/mol		0.58 %	Comparison with a standard	PP4.01.007-CH ₂ ⁵	
11	Amount of substance concentration of O ₂	0.004 mol/mol		to	0.24 mol/mol		0.30 %	Comparison with a standard	PP4.01.007-CH ₁ ⁵	
12	Amount of substance concentration of SO ₂	0.00003 mol/mol		to	0.0012 mol/mol		0.52 %	Comparison with a standard	PP4.01.036 ⁵	
13	Amount of substance concentration of SO ₂	0.00003 mol/mol		to	0.0012 mol/mol		0.32 %	Comparison with a standard	PP4.01.035 ⁵	

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Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified ²	Calibration principle	Calibration procedure identification ³	Work-place
		Min.	unit	max.	unit					
14	Amount of substance concentration of NO	0.00005	mol/mol	to	0.005	mol/mol	0.50 %	Comparison with a standard	PP4.01.039 ⁵	

¹ Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

² The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M, part of CMC, and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95%. If not stated otherwise, the uncertainty values stated without a unit are relative to the value measured. If the calibration is carried out outside the laboratory premises, the measurement uncertainty may be affected.

³ If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

⁴ The working procedure (PP) is derived from the documentation of chromatograph or chromatographic column manufacturers.

⁵ The working procedure (PP) is derived from the documentation of the analyzer manufacturers.