

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

Technické služby ochrany ovzduší Ostrava spol. s r.o.  
Calibration Laboratory  
Janáčkova 1020/7, Moravská Ostrava, 702 00 Ostrava

**CMC for the field of measured quantity: Flow**

Ord. number <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Workplace
		min	unit	max	unit					
1*	Volumetric gas flow / automated measuring systems	600 m <sup>3</sup> h <sup>-1</sup>		to 300,000 m <sup>3</sup> h <sup>-1</sup>		Gas flow velocity: 5 m·s <sup>-1</sup> to 50 m·s <sup>-1</sup>	3.0 %	Calculated from the gas flow velocity determined by direct measurement with a Prandtl tube	SOP_10	

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

<sup>2</sup> The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02, 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. The uncertainty value given here is based on the best laboratory conditions achievable; the uncertainty value of a particular calibration may be higher depending on the conditions of that calibration. For identical limit values of adjacent ranges, the lower uncertainty value always applies.

<sup>3</sup> 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).

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CMC for the field of measured quantity: Amount of substance

Ord. number <sup>1</sup>	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified <sup>2</sup>	Calibration principle	Calibration procedure identification <sup>3</sup>	Workplace
		min	unit	max	unit					
1*	Amount-of-substance concentration /					Gas phase		Comparison with reference gas	SOP_22 (ČSN EN ISO 9169, ČSN ISO 11095)	
	SO <sub>2</sub> analyzers	0 μmol/mol		18 μmol/mol			0.12 μmol/mol			
	SO <sub>2</sub> analyzers	18 μmol/mol	to	5,000 μmol/mol			0.66 %			
	NO analyzers	0 μmol/mol	to	24 μmol/mol			0.12 μmol/mol			
	NO analyzers	24 μmol/mol	to	3,000 μmol/mol			0.5 %			
	CO analyzers	0 μmol/mol	to	17 μmol/mol			0.12 μmol/mol			
	CO analyzers	17 μmol/mol	to	10,000 μmol/mol			0.66 μmol/mol			
	C <sub>3</sub> H <sub>8</sub> analyzers	0 μmol/mol	to	36 μmol/mol			0.11 μmol/mol			
	C <sub>3</sub> H <sub>8</sub> analyzers	36 μmol/mol	to	5,000 μmol/mol			0.3 %			
	CH <sub>4</sub> analyzers	0 μmol/mol	to	36 μmol/mol			0.11 μmol/mol			
	CH <sub>4</sub> analyzers	36 μmol/mol	to	40,000 μmol/mol			0.3 %			
	NH <sub>3</sub> analyzers	0 μmol/mol	to	4 μmol/mol			0.12 μmol/mol			
	NH <sub>3</sub> analyzers	4 μmol/mol	to	2,000 μmol/mol			3.0 %			
	NO <sub>2</sub> analyzers	0 μmol/mol	to	2 μmol/mol			0.12 μmol/mol			
	NO <sub>2</sub> analyzers	2 μmol/mol	to	2,000 μmol/mol			6.0 %			
	N <sub>2</sub> O analyzers	0 μmol/mol	to	6 μmol/mol			0.12 μmol/mol			
	N <sub>2</sub> O analyzers	6 μmol/mol	to	2,000 μmol/mol			2.0 %			
	CO <sub>2</sub> analyzers						0.00001 mol/mol			
	CO <sub>2</sub> analyzers	0 mol/mol	to	0.004 mol/mol						
	CO <sub>2</sub> analyzers	0.004 mol/mol	to	0.5 mol/mol			0.3 %			
	O <sub>2</sub> analyzers						0.00001 mol/mol			
	O <sub>2</sub> analyzers	0 mol/mol	to	0.003 mol/mol						
	O <sub>2</sub> analyzers	0.004 mol/mol	to	0.25 mol/mol			0.42 %			

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		min	unit	max	unit					
2*	Degree of conversion / NO <sub>2</sub> -NO converters (up to 500 μmol/mol)	0 %		to	100 %	Gas phase	0.4 % abs.	Direct measurement by standard reference method	SOP_23 (ČSN EN 14792)	
3*	Amount-of-substance concentration of tracer gas C <sub>3</sub> H <sub>8</sub> / olfactometers	1 μmol/mol		to	100,000 μmol/mol	Gas phase	0.5 %	Direct measurement by standard reference method	SOP_24 (ČSN EN 13725, chap. 6, 7, Annex B)	

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