



EA MLA Signatory  
Český institut pro akreditaci, o.p.s.  
Olšanská 54/3, 130 00 Praha 3

issues

according to section 16 of Act No. 22/1997 Coll., on technical requirements for products, as amended

## CERTIFICATE OF ACCREDITATION

No. 71/2017

**Technické služby ochrany ovzduší Praha a.s.**  
**with registered office Urbánkova 3367, 143 00 Praha 4, Company Registration No. 25079140**

to the Calibration Laboratory No. 2319  
Emission Calibration Laboratory

Scope of accreditation:

Calibration of equipment for the measurement of emissions of air pollutants to the extent as specified in the appendix to this Certificate.

This Certificate of Accreditation is a proof of Accreditation issued on the basis of assessment of fulfillment of the accreditation criteria in accordance with

ČSN EN ISO/IEC 17025:2005

In its activities performed within the scope and for the period of validity of this Certificate, the Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Body meets the specified accreditation requirements in accordance with the relevant regulations applicable to the activity of an accredited Conformity Assessment Body.

The Certificate of Accreditation is valid until: **9. 2. 2022**

Prague: 9. 2. 2017



Jiří Růžička  
Director  
Czech Accreditation Institute  
Public Service Company



**The Appendix is an integral part of  
Certificate of Accreditation No. 71/2017 of 09/02/2017**

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

**Technické služby ochrany ovzduší Praha a.s.**  
Emission Calibration Laboratory  
Jenečská 146/44, 161 00 Praha 6

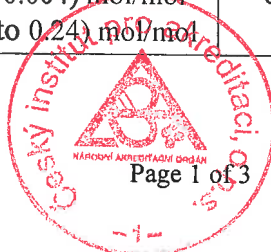
*The Laboratory is qualified to update standards identifying the calibration procedures.*

*Updated list of activities is available in the Laboratory and on the Laboratory website [www.teso.cz](http://www.teso.cz).*

**Measured quantity field: gas concentration**

**Calibration:** Nominal temperature for calibration in the laboratory: (10 to 35) °C

Ordinal number <sup>1)</sup>	Measured quantity	Measured quantity range	Calibration and Measurement Capability [±] <sup>2)</sup>	Calibration procedure identification
1*	Mass concentration of aerosol particles (TZL)	(1 to 92) mg/m <sup>3</sup> (92 to 2000) mg/m <sup>3</sup>	0.7 mg/m <sup>3</sup> 4.6 % MV	IP 101-03 (ISO 10155 Chap. 7.3, ISO 9096 EN 13284-1, EN 13284-2)
2a*	Concentration of gaseous components			IP 102-04 (EN ISO 9169, ISO 11095)
	NO	(0 to 2) µmol/mol (2 to 2000) µmol/mol	0.01 µmol/mol 0.5 % MV	
	CO	(0 to 50) µmol/mol (50 to 8000) µmol/mol	0.12 µmol/mol 0.24 % MV	
	SO <sub>2</sub>	(0 to 2) µmol/mol (2 to 2000) µmol/mol	0.01 µmol/mol 0.5 % MV	
	C <sub>3</sub> H <sub>8</sub>	(0 to 5) µmol/mol (5 to 5000) µmol/mol	0.01 µmol/mol 0.2% MV	
	CH <sub>4</sub>	(0 to 11) µmol/mol (11 to 40000) µmol/mol	0.05 µmol/mol 0.42% MV	
	n-hexane (C <sub>6</sub> H <sub>14</sub> )	(0 to 1) µmol/mol (1 to 2000) µmol/mol	0.01 µmol/mol 1.0 % MV	
	NH <sub>3</sub>	(0 to 1) µmol/mol (1 to 2000) µmol/mol	0.01 µmol/mol 1.0 % MV	
	N <sub>2</sub> O	(0 to 2) µmol/mol (2 to 2000) µmol/mol	0.01 µmol/mol 0.5 % MV	
	NO <sub>2</sub>	(0 to 0.5) µmol/mol (0,5 to 2000) µmol/mol	0.01 µmol/mol 2.0 % MV	
	O <sub>2</sub>	(0 to 0.02) mol/mol (0.02 to 0.23) mol/mol	0.0001 mol/mol 0.58% MV	
	CO <sub>2</sub>	(0 to 0.004) mol/mol (0.04 to 0.24) mol/mol	0.00001 mol/mol 0.28% MV	



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Ordinal number <sup>1)</sup>	Measured quantity	Measured quantity range	Calibration and Measurement Capability [±] <sup>2)</sup>	Calibration procedure identification
2b*	NO <sub>2</sub> – NO converter efficiency  (≤ 500 μmol/mol NO)	(1 to 100) %	0.4 % MV abs	IP 102-05 (EN ISO 9169, EN 14792, US EPA 40 CFR, Ch.I, § 86.332-79)
2c*	Concentration of tracer gas C <sub>3</sub> H <sub>8</sub>	(1 to 100 000) μmol/mol	0.5 % MV	IP 102-06 (EN 13725, chap. 5, 6, Annex C)

<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> Expressed like uncertainty in accordance with the requirements of the document EA 4/02 at k = 2.

**Measured instruments or devices:**

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
1	Equipment working on the principle of absorption of β - radiation, photometry
2a.	Sources and equipment for the measurement of NO, NO <sub>2</sub> , N <sub>2</sub> O, NO <sub>x</sub> , CO, SO <sub>2</sub> , NH <sub>3</sub> , propane (C <sub>3</sub> H <sub>8</sub> ), methane (CH <sub>4</sub> ), hexane (C <sub>6</sub> H <sub>14</sub> ), O <sub>2</sub> , CO <sub>2</sub> , equipment working on the principle of gas chromatography, FID detection, spectrometry, chemiluminescence, magnetic susceptibility, electrochemical and chemical methods
2b.	NO <sub>2</sub> – NO Convertors
2c.	Gas mixing and dilution equipment, dynamic olfactometers



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**Field of measured quantity: flow rate**

**Calibration:** Nominal temperature for calibration in the laboratory: (10 to 35) °C

Ordinal number <sup>1)</sup>	Measured quantity	Measured quantity range	Calibration and Measurement Capability [ ± ] <sup>2)</sup>	Calibration procedure identification
3*	Determination of the velocity and flow rate of gas streams in ducts	(3 to 50) ms <sup>-1</sup>	3 % MV	IP 103-01 (ISO 10780 EN 16911-1 EN 16911-2)
4*	Gas flow rate	(1.3 to 1.5) m <sup>3</sup> h <sup>-1</sup> s.c. (1.5 to 3) m <sup>3</sup> h <sup>-1</sup> s.c. (3 to 30) m <sup>3</sup> h <sup>-1</sup> s.c.	1.1 % MV 1.0% MV 1.0% MV	IP 104-01 (EN ISO 5167-1 EN ISO 5167-2 EN ISO 5167-3 EN ISO 5167-4)

<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> Expressed like uncertainty in accordance with the requirements of the document EA 4/02 at k = 2.

**Explanations and abbreviations:**

IP Internal procedure of the Emission Calibration Laboratory  
MV Measured Value  
n.p. Normal conditions  
US EPA United States Environmental Protection Agency

**Measured instruments or devices:**

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
3	Linear velocity probes with pressure difference, ultrasonic gas flow rate meters, mechanical gas flow rate meters
4.	Gas flow sensors

