NÁRODNÍ AKREDITAČNÍ ORGÁN

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. 48/2022

KALIST AKL s.r.o.
with registered office č.p. 8, 769 01 Třebětice, Company Registration No. 04432436

to the Calibration Laboratory No. **2394**
KALIST AKL s.r.o., Calibration Laboratory

Scope of accreditation:

Calibration in the field of mass, volume, temperature, humidity, mechanical motion – rotational speed and time 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 17025:2018

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.

This Certificate of Accreditation replaces, to the full extent, Certificate No.: 580/2020 of 25. 9. 2020, or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **25. 9. 2025**

Prague: 1. 2. 2022

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Lukáš Burda
Director of the Department
of Testing and Calibration Laboratories
Czech Accreditation Institute
Public Service Company

PROTI NOVÁ SECURITY SEAL BEZPEČNOSTNÍ PEČEŤ

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

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CMC for the field of measured quantity: Volume

Ord. number [1]	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified[2,4]	Calibration principle	Calibration procedure identification[3]	Work place
		min.	unit	max.	unit					
1	Piston pipettes and other piston volume meters	0.5 µl 10,000 µl		to 10,000 µl to 100,000 µl		Distilled water	0.13 % + 0,01 µl 0.05 %	Gravimetric method	KP-05 (ČSN EN ISO 8655-6, EURAMET cg-19)	

[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, 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 lowest uncertainty includes the effect of the operator and does not include the statistical components of uncertainty.

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CMC for the field of measured quantity: Mass

Ord. number [1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		max.	unit	Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified[2, 4]	Calibration principle	Calibration procedure identification [3]	Work-place
1*	Balances with non-automatic function	1 mg		to	66 kg		By E2 weight	$9.3 \cdot 10^{-7}$	Loading using a reference weight	KP-01	
		66 kg		to	270 kg		By F2 weight	$9.3 \cdot 10^{-6}$			
		270 kg		to	11,00 0 kg		By M1 weight	$2.9 \cdot 10^{-5}$			
		1 t		to	5 t			1.4 kg	Loading using M1 reference weight and substitute load		
		5 t		to	10 t			2.9 kg			
		10 t		to	20 t			7.2 kg			
		20 t		to	30 t			17 kg			
2	Class F1, F2, M1, M2, M3 weights (according to OIML R111), reference weights, special weights and other bodies with constant mass	1 mg		to	50 mg			0.008 mg	Comparison with a reference weight	KP-06	
		50 mg		to	1 g			0.016 mg			
		1 g		to	5 g			0.025 mg			
		5 g		to	50 g			0.06 mg			
		50 g		to	200 g			0.2 mg			
		200 g		to	2 kg			2 mg			
		2 kg		to	10 kg			12 mg			
		10 kg		to	20 kg			25 mg			
		20 kg		to	50 kg			50 mg			
		50 kg		to	60 kg			100 mg			

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

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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 lowest expanded measurement uncertainty is stated without accounting for the effect of the calibrated meter.

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CMC for the field of measured quantity: Mechanical motion

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*	Speed / rpm gauges	10	min^{-1}	10,000	min^{-1}		2 min^{-1}	Comparison of an rpm gauge in a calibrated device with a reference rpm gauge	KP-02	
		10,000	min^{-1}	50,000	min^{-1}		0.012 % + 1 min^{-1}			

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CMC for the field of measured quantity: Temperature

Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		max.	unit	Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work-place
1*	Glass thermometers	-40	°C	to	20	°C		0.15 °C	Comparison with a reference thermometer in a liquid bath	KP-03 part C	
		20	°C	to	150	°C		0.10 °C			
		150	°C	to	180	°C		0.12 °C			
	Indicating thermometers, temperature measuring chains, dataloggers	-196	°C					0.70 °C	Comparison with a reference thermometer in liquid nitrogen	KP-03 part A	
		-70	°C	to	-40	°C		0.45 °C	Comparison with a reference thermometer in a climatic chamber		
		-40	°C	to	150	°C		0.40 °C			
		150	°C	to	180	°C		0.45 °C			
		-40	°C	to	20	°C		0.15 °C	Comparison with a reference thermometer in a liquid bath		
		20	°C	to	150	°C		0.10 °C			
		150	°C	to	180	°C		0.12 °C			
		180	°C	to	230	°C		0.25 °C	Comparison with a reference thermometer in a dry block		
		230	°C	to	415	°C		0.45 °C			
		415	°C	to	600	°C		1.5 °C			
		600	°C	to	800	°C		2.6 °C			
		800	°C	to	1,100	°C		2.8 °C			

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Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		Nominal range max.	unit	Parameter(s) of the meas. quantity	Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work-place
	Calibration of thermal equipment with temperature control								Comparison with a reference thermometer	KP-03 part B	
		-196	°C	to	-70	°C		0.90 °C			
		-70	°C	to	-40	°C		0.60 °C			
		-40	°C	to	150	°C		0.30 °C			
		150	°C	to	230	°C		0.45 °C			
		230	°C	to	415	°C		0.50 °C			
		415	°C	to	600	°C		1.6 °C			
		600	°C	to	800	°C		2.6 °C			
		800	°C	to	1,100	°C		2.8 °C			
	Temperature / Calibration of infrared non-contact thermometers								Comparison with a reference standard	KP-03-IR	
		-30	°C	to	0	°C		2.2 °C			
		0	°C	to	20	°C		1.5 °C			
		20	°C	to	80	°C		1.2 °C			
		80	°C	to	200	°C		1.6 °C			
		200	°C	to	350	°C		2.5 °C			
		350	°C	to	500	°C		3.0 °C			

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CMC for the field of measured quantity: Time and frequency quantities

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*	Time interval / stopwatches, timers and chronometers	1	s	to 86,400	s		0.3 s	Comparison with reference stopwatches, manual activation	KP-07	

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CMC for the field of measured quantity: Humidity

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*	Relative humidity / hygrometers and humidity measuring chains, humidity dataloggers	10 % RH	to	65 % RH			1.8 % RH	Comparison with a reference hygrometer	KP-04	
		65 % RH	to	80 % RH			1.9 % RH			
		80 % RH	to	95 % RH			2.2 % RH			

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RH – Relative Humidity

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