


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 UKAS CALIBRATION 8751 Accredited to ISO/IEC 17025:2017	Ellab (UK) Limited Issue No: 017 Issue date: 19 April 2024	
	Ellab (UK) Limited Second Floor, Pioneer House Pioneer Business Park Ellesmere Port Cheshire CH65 1AD	Contact: Mr Phil Dodd Tel: +44 (0)151 355 1314 Fax: +44 (0)151 357 3428 E-Mail: phd@ellab.com Website: www.elab.com

Calibration performed by the Organisations at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address Second Floor Pioneer House Pioneer Business Park Ellesmere Port Cheshire CH65 1AD Local contact Phil Dodd Tel: +44 (0) 151 355 1314 Fax: +44 (0) 151 357 3428 Email: phd@ellab.com	Temperature calibration of wireless monitors for mapping, temperature Indicators, recorders and transmitters Humidity Timers	Lab

Site activities performed away from the locations listed above:

Location details	Activity	Location code
The customer's site or premises must be suitable for the nature of the particular calibrations undertaken and will be the subject of contract review arrangements between the laboratory and the customer.	Temperature controlled enclosures Temperature Indicators, recorders and transmitters Humidity Timers Non automatic weighing machines	Site



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Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
TEMPERATURE				
All calibration by comparison				
Temperature dataloggers, indicators, controllers, wireless transmitters and recorders, all with sensors	-90 °C to -70 °C -70 °C to -45 °C -45 °C to -25 °C -25 °C to +140 °C	0.18 °C 0.13 °C 0.16 °C 0.12 °C	In air chamber Uncertainties for the site will depend on the stability of the customers environment	Site Lab/Site
	-90 °C to +150 °C	0.06 °C	In block calibrator	Lab
	-90 °C to +150 °C +150 °C to +250 °C	0.10 °C 0.39 °C		Site
Temperature controlled incubators, ovens, environmental chambers, fridges/refrigerators, freezers and liquid baths	-90 °C to -80 °C -80 °C to -40 °C -40 °C to -25 °C -25 °C to 0 °C 0 °C to 85 °C 85 °C to 140 °C	1.5 °C 1.2 °C 0.50 °C 0.42 °C 0.21 °C 0.19 °C	Single and multipoint time dependent temperature profiling, also referred to as spatial temperature surveying or mapping	Site
HUMIDITY				
Relative humidity instruments	Performed at 23 °C 5 %rh to 90 %rh	0.09 °C 0.50 %rh to 1.41 %rh	By comparison against a chilled mirror hygrometer and platinum resistance thermometer.	Lab
	Performed at 23 °C 5 %rh to 90 %rh	0.19 °C 1.83 %rh	By comparison against a reference thermo-hygrometer.	Site
CENTRIFUGES				
Thermal performance of centrifuges	0°C to 40°C	0.38 °C		Lab/Site
Timers	10 s to 1 hr	0.9 s		Lab/Site
Rotational speed	12 rpm to 60000 rpm	1.7 rpm		Lab/Site



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
NON-AUTOMATIC WEIGHING INSTRUMENTS Electronic digital top-pan balances See note 1 and note 2 Methods consistent EURAMET CG18	Up to 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg 15 kg	0.0090 mg 0.012 mg 0.018 mg 0.019 mg 0.025 mg 0.034 mg 0.064 mg 0.088 mg 0.23 mg 0.32 mg 1.5 mg 8.4 mg 9.2 mg 13 mg 17 mg 30 mg	Note 1: Weights are available in OIML class: E2 1 mg to 200 g, maximum grouped load 500 g F1 500 g to 20 kg, maximum grouped load 30 kg Note 2: Other values within the range may be calibrated with an interpolated uncertainty	Site
END				



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Appendix - Calibration and Measurement Capabilities

Introduction

The definitive statement of the accreditation status of a calibration laboratory is the Accreditation Certificate and the associated Schedule of Accreditation. This Schedule of Accreditation is a critical document, as it defines the measurement capabilities, ranges and boundaries of the calibration activities for which the organisation holds accreditation.

Calibration and Measurement Capabilities (CMCs)

The capabilities provided by accredited calibration laboratories are described by the Calibration and Measurement Capability (CMC), which expresses the lowest measurement uncertainty that can be achieved during a calibration. If a particular device under calibration itself contributes significantly to the uncertainty (for example, if it has limited resolution or exhibits significant non-repeatability) then the uncertainty quoted on a calibration certificate will be increased to account for such factors.

The CMC is normally used to describe the uncertainty that appears in an accredited calibration laboratory's schedule of accreditation and is the uncertainty for which the laboratory has been accredited using the procedure that was the subject of assessment. The measurement uncertainty is calculated according to the procedures given in the GUM and is normally stated as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $k = 2$. An accredited laboratory is not permitted to quote an uncertainty that is smaller than the published measurement uncertainty in certificates issued under its accreditation.

Expression of CMCs - symbols and units

It should be noted that the percentage symbol (%) represents the number 0.01. In cases where the measurement uncertainty is stated as a percentage, this is to be interpreted as meaning percentage of the measurand. Thus, for example, a measurement uncertainty of 1.5 % means $1.5 \times 0.01 \times q$, where q is the quantity value.

The notation $Q[a, b]$ stands for the root-sum-square of the terms between brackets: $Q[a, b] = [a^2 + b^2]^{1/2}$