


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 0335 Accredited to ISO/IEC 17025:2017	Glasgow City Council, trading as Glasgow Scientific Services	
	Issue No: 046 Issue date: 12 September 2024	
	Land & Environmental Services Calibration and Test Centre Colston Laboratory 64 Everard Drive Glasgow G21 1XG	Contact: Tracy Macbeth Tel: +44 (0)1412 760660 Fax: +44 (0)1412 760640 E-Mail: caltest@glasgow.gov.uk Website: glasgow.gov.uk

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 Land & Environmental Services Calibration and Test Centre Colston Laboratory 64 Everard Drive Glasgow G21 1XG	Local contact T Macbeth	Mass Temperature P

Site activities performed away from the locations listed above:

Location details	Activity	Location code
Customers' sites or premises The customer's sites or premises must be suitable for the nature of the particular calibrations undertaken and will be subject of contract review arrangements between the laboratory and the customer	Temperature Nonautomatic weighing machines	S



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Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
MASS See Notes 1 to 3	Nominal value (g)	(mg)	NOTES 1 Intermediate values can be calibrated with an uncertainty not less than that interpolated from the next higher and lower nominal value in the table. 2 Calibrations can be given in other units as required 3 Calibration by Borda's method of substitution	P
MASS See Notes 1 to 3 Self- or semi-self-indicating instruments	Load	(mg)	NOTES 1 Weights are available in OIML R111 class: E2 from 1 mg to 500 g, maximum group load 1 kg F1 from 1 mg to 10 kg, maximum group load 20 kg M1 weights 20 kg, maximum grouped load 200 kg 2 The method of calibration reflects EURAMET CG-18	S
	25 000	250		
	20 000	20		
	10 000	10		
	5 000	5.0		
	2 000	2.0		
	1 000	1.0		
	500	0.25		
	200	0.13		
	100	0.050		
	50	0.030		
	20	0.025		
	10	0.020		
	5	0.015		
	2	0.012		
	1	0.010		
	0.5	0.0080		
	0.2	0.0060		
	0.1	0.0084		
	0.05	0.0040		
	0.02	0.0030		
	0.01	0.0030		
	0.005	0.0020		
	0.002	0.0020		
	0.001	0.0020		
	5 mg	0.003		
	50 mg	0.006		
	200 mg	0.009		
	500 mg	0.012		
	1 g	0.015		
	2 g	0.019		
	5 g	0.024		
	10 g	0.033		
	20 g	0.045		
	50 g	0.074		
	100 g	0.14		
	200 g	0.28		
	500 g	0.70		
	1 kg	7.7 g		
	2 kg	16 g		
	5 kg	39 g		
	10 kg	78 g		
	20 kg	160 g		
	30 kg	3.1 g		
	50 kg	3.9 g		
	100 kg	8.0 g		
	200 kg	17.0 g		



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
TEMPERATURE See Notes 7 to 10				P
Liquid-in-glass thermometers	-30 °C to +250 °C	0.020 °C	7 By comparison in a liquid bath	
Electronic thermometers with sensors	-30 °C to +250 °C	0.020 °C	8 By comparison in a liquid bath	
	250 °C to 600 °C	2.0 °C	9 By comparison in a dry block	
Temperature controlled incubators, ovens, furnaces, environmental chambers, fridges/refrigerators and freezers (inclusive of associated indicators, controllers and recorders within the specified parameters and ranges)	-30 °C to +250 °C	1.0 °C	10 Multipoint time dependent temperature profiling, also referred to as spatial temperature surveying or mapping	S
	250 °C to 600 °C	2.0 °C		

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: $Q[a, b] = [a^2 + b^2]^{1/2}$