

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 10447 Accredited to ISO/IEC 17025:2017	Integrated Scientific Limited	
	Issue No: 004 Issue date: 20 August 2021	
	Unit 3 Aspen Court Centurion Business Park Rotherham S60 1FB United Kingdom	Contact: Mr Ben Cole Tel: +44 (0) 1709 830493 E-Mail: ben@integsci.com Website: www.integsci.com
Calibration performed by the Organisation at the locations specified		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Unit 3 Aspen Court Centurion Business Park Rotherham S60 1FB Local contact As above	Calibration of analysers	P

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	Calibration of analysers	S



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Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
Calibration of analyser for petroleum products, lubricants and fuels for the following parameters:				
Volume	5 ml 100 ml	0.046 ml 0.18 ml	Liquid capacity measured using a pipette	P & S
Gas volume flow rate	5 ml/min to 750 ml/min 160 ml/min to 822 ml/min	53 ml/min 13 ml/min	By comparison with Mass flow at Standard flow rates referenced to 101.325 kPa and 0 °C using air or nitrogen	P & S
Gas mass flow rate	5 sccm to 750 sccm	9.5 sccm		
Gas Pressure Gauge	-90 kPa to -15 kPa -15 kPa to 20 kPa 20 kPa to 700 kPa 700 kPa to 7 MPa	660 Pa 19 Pa 660 Pa 5.0 kPa	By comparison	P & S
Gas Pressure Absolute	85 kPa to 105 kPa	290 Pa	By comparison	P & S
ROTATIONAL SPEED			By comparison with an optical tachometer	P & S
	1 to 10000 rpm	1.0 rpm		
TIME			By comparison	P & S
	0 to 7200 s	0.50 s		
TEMPERATURE			By comparison	P & S
PRT sensor and indicator calibration	30 °C to 250 °C	0.080 °C	in a metal block bath	
Calibration of stirred viscosity and re-circulating baths associated with Petroleum Products	-60 °C to 250 °C	0.040 °C	Single defined position	
Calibration of non-stirred cold property baths associated with Petroleum Products	-60 °C to 250 °C	0.50 °C	Single defined position	



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
ELECTRICAL Electrical simulation of temperature Thermocouple Type J Thermocouple Type K PT100	-100 °C to 1000 °C -100 °C to 1000 °C -100 °C to 500 °C	1.20 °C 1.40 °C 0.060 °C	By comparison By comparison with reference resistors	P & S
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: $Q[a, b] = [a^2 + b^2]^{1/2}$