



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

SCIENTIFIC CALIBRATION, INC.
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CALIBRATION

Valid To: January 31, 2020

Certificate Number: 5345.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1,4}:

I. Mechanical

Parameter/Equipment	Range	CMC ² (±)	Comments
Analytical Scales and Balances ³	(0.002 to 0.5) g	23 µg	Class 1 weights, ASTM E-617-97
	(0.5 to 5) g	47 µg	
	(5 to 20) g	91 µg	
	(20 to 50) g	0.14 mg	
	(50 to 100) g	0.29 mg	
	(100 to 150) g	0.43 mg	
	(150 to 200) g	0.6 mg	
	(200 to 500) g	3.9 mg	
	(500 to 1000) g	4.6 mg	
	(1 to 100) g	1.9 mg	
	(100 to 200) g	2.8 mg	
	(200 to 500) g	6.1 mg	
	500 g to 1 kg	12 mg	
	(1 to 2) kg	24 mg	
(2 to 5) kg	59 mg		

Parameter/Equipment	Range	CMC ² (±)	Comments
Pipettes ³	(0.1 to 1) µL	0.026 µL	Sartorius Cubis MP6.6S
	(1 to 20) µL	0.12 µL	Gravimetric, ASTM E-1154-89, Mettler Toledo WXTS205 ISO 8655
	(20 to 50) µL	0.16 µL	
	(50 to 100) µL	0.51 µL	
	(100 to 200) µL	0.63 µL	
	(200 to 300) µL	0.96 µL	
	(300 to 1000) µL	3.8 µL	
	(1 to 2) mL	10 µL	
	(2 to 5) mL	13 µL	
	(5 to 10) mL	32 µL	
	(10 to 25) mL	68 µL	
	(25 to 50) mL	0.14 mL	
	(50 to 100) mL	0.59 mL	
Titrator ³	(25 to 1000) µL	4.5 µL	
	(1000 to 5000) µL	13 µL	
	(5000 to 10 000) µL	25 µL	
	(10 000 to 20 000) µL	50 µL	
	(20 000 to 50 000) µL	150 µL	

II. Thermodynamics

Parameter/Equipment	Range	CMC ² (±)	Comments
Digital Thermometers	-86 °C to 0 °C	0.11 °C	Hart 1521 thermometer, Fluke 5623B probe, Kaye CTR-80
	0 °C to 140 °C	0.13 °C	Hart 1521 thermometer, Fluke 5623B probe, Kaye LTR-140
LIG Thermometers	-86 °C to 0 °C	0.59 °C	Hart 1521 thermometer, Fluke 5623B probe, Kaye CTR-80
	0 °C to 140 °C	0.6 °C	Hart 1521 thermometer, Fluke 5623B probe, Kaye LTR-140

Parameter/Equipment	Range	CMC ² (±)	Comments
Thermocyclers ³	4 °C to 95 °C	0.7 °C	Quanta Biotech TAS system
Freezers ³	-196 °C to 0 °C	2.1 °C	Fluke 5411
Incubators ³	10 °C to 50 °C	1.6 °C	Fluke 5411
Refrigerators ³	0 °C to 10 °C	1.6 °C	Fluke 5411
Ovens ³	30 °C to 400 °C	2 °C	Fluke 5411

III. Time & Frequency

Parameter/Equipment	Range	CMC ² (±)	Comments
Centrifuges ³	(100 to 100 000) RPM	1.8 RPM + 0.01 % of reading	Monarch PLT-200 laser tachometer

¹ This laboratory offers commercial calibration service, field calibration service, and dimensional testing service.

² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

- ³ Field calibration service is available for this calibration and this laboratory meets A2LA R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.
- ⁴ This scope meets A2LA's *P112 Flexible Scope Policy*.



Accredited Laboratory

A2LA has accredited

SCIENTIFIC CALIBRATION

Cary, NC

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system *(refer to joint ISO-ILAC-IAF Communiqué dated April 2017)*.



Presented this 31st day of October 2019.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5345.01
Valid to January 31, 2020
Revised December 3, 2019

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.