



# YOUR LAB REIMAGINED.



# WHO WE ARE

Welcome to Scientific Calibration - your complete laboratory solution. Almost three decades ago, we embarked on a journey to revolutionize the scientific instrument industry. Today, our vision is manifested in our broad range of services that are designed to cater to the intricate needs of busy science professionals.

At the heart of our offerings are a range of expert services including calibration, validation, equipment repair, refrigeration, freezing, and preventive maintenance. These core services are designed to ensure smooth and uninterrupted lab operations, proactively identifying and addressing potential issues for optimal equipment performance.

Our commitment to the scientific community extends to the provision of high-quality laboratory equipment. Our offerings range from cutting-edge new instruments to quality-assured pre-owned equipment, ensuring we can cater to a wide spectrum of laboratory needs and budgets. Each piece of equipment we provide aligns with our unwavering commitment to quality, precision, and durability.

As we continue our journey, marking over 27 years of exceptional service in the industry, we stand alongside our extensive network of trusted partners. We are committed to delivering superior quality, competitive pricing, and a diverse array of offerings. At Scientific Calibration, we welcome you to experience the excellence of comprehensive laboratory services tailored for the future.

# CERTIFICATIONS









# **OUR SERVICES**



### CALIBRATION

At Scientific Calibration, we offer an extensive selection of calibration services for your laboratory equipment, including both in-house and on-site options. Our commitment to quality is reflected in our ISO 17025 accreditation, and our calibration certificates consistently meet or exceed the stringent standards of GLP, GMP, ISO, and CAP. Our team of skilled, certified technicians approach every service with precision and attention to detail, utilizing cutting-edge, NIST traceable equipment to ensure accurate results.



### VALIDATION

With over 27 years of validation experience, we are committed to providing exceptional service that meets the highest standards for your equipment. By fulfilling your lab's preventative maintenance requirements, we aim to reduce inefficiencies caused by equipment failures, resulting in decreased downtime and improved productivity. Our validation services also help lower long-term equipment costs by identifying and addressing potential issues before they become major problems, ultimately extending the lifespan of your laboratory assets.



### **SERVICE & REPAIRS**

With over 27 years of experience in servicing and repairing equipment, our factory-trained and certified technicians and engineers have the expertise to restore your unit to optimal condition. At our core, we prioritize efficiency and quality, and are committed to providing a fast turnaround time for your equipment. Our team will go above and beyond to ensure your satisfaction, utilizing the latest techniques and technologies to get your equipment running like new.



### LABORATORY EQUIPMENT

As a dedicated partner to top industry manufacturers, our foremost objective is to offer you only the highest quality equipment available. With an extensive inventory of both new and pre-owned equipment from all the leading brands you know and trust, we can provide you with the tools you need, no matter the scope of your project. Whether you require a single essential instrument or an entire lab setup, our team is equipped to guide you through the selection process and provide tailored solutions to meet your unique requirements.





# YOUR ON-DEMAND DRY ICE SOLUTION.

# At Sci-Ice, we take our role in your journey seriously.

At Sci-Ice, we take pride in our reputation for excellence in dry ice manufacturing and distribution. With an expansive 24,000 square-foot warehouse and office space located just outside RTP, our state-of-the-art facility provides the necessary capacity to meet the ever-growing demands of our valued customers.

Our team of qualified technicians brings years of experience to ensure that our dry ice products meet the highest standards of quality and safety. Whether you require dry ice for shipping, laboratory testing, or industrial processes, we specialize in providing made-to-order solutions tailored to your specific needs.

# WHY US?

## FRESHNESS GUARANTEED.

We understand that the ice we provide is a vital component of many business operations, and that's why we've developed a proprietary production process that guarantees the purest, freshest ice possible with minimal sublimation from creation to delivery. Whether you need 50 pounds or 15,000 pounds, we have you covered.

# OUR SUPERIOR ICE.

Our commitment to excellence doesn't stop there, as we also strive to provide the most dense ice on the market, ensuring that our customers never have to compromise on freshness or quality. We offer two sizes of dry ice pellets (3 and 16 mm) and re-usable insulated bulk containers that keep your ice fresher, longer.

## ON TIME, EVERY TIME.

We offer the convenience of local pickup and reliable delivery services, with live, local customer service representatives ensuring exceptional customer satisfaction every step of the way.

# SCIENTIFIC CALIBRATION SERVICE LIST

# **EQUIPMENT SERVICES**

### **ANALYTICAL BALANCES / SCALES**

- Linearity and Accuracy Calibration (Up to 5 Point Calibration)
- USP41 Calibration: Eccentricity, Linearity, Accuracy and Repeatability (includes minimum weight)
- Preventative Maintenance
- Qualification

### **ANEMOMETERS**

3rd Party Vendor Calibration

### AUTOCLAVES

- Benchtop Model (Temperature and Time, Single Point Calibration)
- Large Scale (Temperature and Time, Single Point Calibration)
- Additional Option for Pressure Calibration (Up to 3 Readings)
- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis

### **AUTOMATION, AUTOMATED LIQUID HANDLINGS**

- Gravimetric and Colorimetric Calibration, High/Low Volume Check
- Programming

### **BATHS: DRY, HEAT BLOCK, OR WATERS**

- Temperature (Single Point Calibration)
- Temperature and Shaking (Up to 3 Point Calibration)

### BIOREACTOR

- Speed, Time, Temperature, Level Sensor Calibration
- Qualification

### **CALIPERS / MICROMETERS**

• Up to 5 Point Calibration

### CENTRIFUGES

- Benchtop Model: Speed (Up to 3 Point Calibration)
- Floor Model: Speed (Up to 3 Point Calibration)
- Additional Option for Temperature Calibration
- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis

### **CHART RECORDERS**

- Relative Humidity and Temperature (Single Point Calibration)
- Temperature Add-On (Single Point)

### **CONDUCTIVITY METERS**

- Requires Standards Kit, Model Dependent
- Calibration, Model Dependent

### **DATA LOGGERS**

- Temperature (Single Point Calibration)
- Relative Humidity
- CO2
- Differential Pressure

### **ENVIRONMENTAL CHAMBERS**

- Temperature (Single Point Calibration)
- Preventative Maintenance
- Relative Humidity
- CO2
- Qualification
- Repair Services/Diagnosis

### FLOW METERS (MODEL DEPENDENT)

- Gas (3 Point Calibration)
- Liquid (3 Point Calibration)

### FORCE/TORQUE GAUGES

Up to 3 Point Calibration

### FREEZERS

- -20 Degree Celsius (Single Point Calibration)
- -80 Degree Celsius (Single Point Calibration)
- -196 Degree Celsius (Single Point Calibration)
- LN2 Sensor Check
- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis

### **GAS CHROMATOGRAPHY**

- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis

### **GAUGE BLOCKS**

• 3rd Party Vendor Calibration

### GAUGES

- Magnehelic (Up to 3 Point Calibration)
- Pressure (Up to 3 Point Calibration)
- Vacuum (Up to 3 Point Calibration)

### HOODS

- Biological Safety Cabinets (In Flow and Down Flow Certification)
- HEPA Filter Integrity Testing
- Fume Hoods (In Flow Certification)
- PCR Hoods (Down Flow Certification)
- Decontamination
- Qualification
- Preventative Maintenance
- Repair Services/Diagnosis

### **HYGROMETERS**

- Temperature and Humidity (Single Point Calibration)
- Humidity (Single Point Calibration)

### HPLC

- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis
- ICE MACHINES (Model Dependent)
- Temperature (Single Point Calibration)
- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis

### INCUBATOR

- Temperature (Single Point Calibration)
- Relative Humidity (Single Point Calibration)
- CO2 (Single Point Calibration)
- O2 (Single Point Calibration)
- Shaking (Up to 3 Point Calibration)
- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis

### MANOMETERS

Up to 3 Point Calibration

### **MEASURING TAPES/RULERS**

5 Point Calibration

### **MICROPLATE, BIOTEK CALIBRATION PLATES**

Up to 5 Point Calibration

### **MULTIMETERS**

3rd Party Vendor Calibration

### **OSMOMETERS**

- Up to 3 Standards Calibration (Standards Not Included)
- Up to 5 Standards Calibration (Standards Not Included)

### **OVENS / FURNACES**

- Temperature (Single Point Calibration)
- Timer (Up to 3 Point Calibration)
- Qualification
- Preventative Maintenance
- Repair Services/Diagnosis

### **PH METERS**

- pH (Up to 3 Point Calibration)
- Temperature (Single Point Calibration)

### **POWER SUPPLIES**

• AC/DC (Up to 3 Point Calibration)

### **PLATE READERS**

- Luminescence
- Absorbance
- Florescence
- Qualification

### **PLATE WASHERS**

- Preventative Maintenance
- Up to 3 Point Calibration

### REFRIGERATORS

- Temperature (Single Point Calibration)
- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis

### **RESISTIVITY METERS**

Up to 2 Point Calibration

### REFRACTOMETERS

Single Point Calibration

### SEALERS

- Laminator Roll (Calibration)
- Heat Sealer (Calibration)

### SHAKERS/STIRRERS/VORTEXER

- Speed (Up to 3 Point Calibration)
- Temperature (Single Point Calibration)
- Time (Up to 3 Point Calibration)
- Qualification
- Preventative Maintenance
- Repair Services/Diagnosis

### SPECTROPHOTOMETERS (Cuvettes ONLY, no Plate)

- Visible Range
- UV Range
- Nanodrop

### **TACHOMETERS**

Up to 5 Point Calibration

### THERMOBRITE

Up to 12 Reading/2 Set Point Calibration

### **THERMOMETERS, GLASS**

- Temperature (Single Point Calibration)
- Temperature (Up to 3 Point Calibration)

### **THERMOMETERS, DIGITAL**

- Temperature (Single Point Calibration)
- Temperature (Up to 3 Point Calibration)

### THERMOMETERS, IR

- Temperature (Single Point Calibration)
- Temperature (Up to 3 Point Calibration)

### THERMOCYCLERS

- 96 Well Calibration
- 384 Well Calibration
- Preventative Maintenance
- Qualification

### THERMOCYCLERS, TEMPERATURE ACQUISITION SYSTEM

• TAS Probes Per Set of 16 Probes

### TIMERS

• Up to 3 Point Calibration

### TITRATORS

- Preventative Maintenance
- Qualification

### **TORQUE/FORCE**

Up to 3 Point Calibration

### TURBIDIMETERS

Single Point Calibration (Model Dependent and Requires Standards Kit)

### VISCOMETERS

• Up to 3 Point Calibration (Standards Not Included)

### **UPLC & UPHLC**

- Preventative Maintenance
- Qualification
- Repair Services/Diagnosis

### WEIGHTS, INDIVIDUAL WEIGHTS

3rd Party Vendor Calibration

# LIQUID TRANSFER/PIPETTE SERVICES

### **PIPETTES, 8655 CALIBRATION**

- Single Channel, 3x10, As Found and As Left
- Multi-Channel, 3x10, Every Channel, As Found and As Left
- Preventative Maintenance and Repair

### **PIPETTES, BOTTLE-TOP DISPENSERS**

- Calibration, As Left Only
- Calibration, As Found and As Left
- Preventative Maintenance and Repair

### PIPETTES, MULTI-CHANNELS (8/12/16/24 Channels)

- Calibration, As Left Only
- Calibration, As Found and As Left
- Additional Option for Testing at Each Channel
- Preventative Maintenance and Repair

### **PIPETTES, SINGLE CHANNELS**

- Calibration, As Left Only
- Calibration, As Found and As Left
- Preventative Maintenance and Repair

### **PIPETTES, REPEATERS**

- Calibration, As Left Only
- Calibration, As Found and As Left
- Preventative Maintenance and Repair

### **PIPETTES, RENOK**

- Calibration, As Left Only
- Calibration, As Found and As Left

### **PIPET-AID**

Verification

# LIQUID TRANSFER/PIPETTE SERVICES

### DILUTERS

- Calibration, As Left Only (Per Syringe)
- Calibration, As Found and As Left (Per Syringe)
- Preventative Maintenance

### LIQUIDATORS

- Gravimetric Calibration, As Left Only
- Gravimetric Calibration, As Found and As Left
- Optical Precision Check

### **MULTIDROP, CASSETTES**

- Calibration, As Left Only
- Calibration, As Found and As Left
- Kit Rebuild, Standard Length (17")
- Extra Tubing Length (Up to 36")

### **SYRINGES**

- Calibration, As Left Only
- Calibration, As Found and As Left
- Preventative Maintenance

# **STORAGE, DELIVERY, RELOCATION AND DECONTAMINATION SERVICES**

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CRATING

**DECONTAMINATION OF HOODS** 

**DECONTAMINATION OF ROOMS** 

DIAGNOSIS/EVALUATION/PROJECT WALK THROUGH

**EQUIPMENT DELIVERY** 

EQUIPMENT PICKUP DISPOSALS

**EQUIPMENT RELOCATION** 

FULL LAB MOVE/RELOCATION

**HOOD RELOCATION & ASSEMBLY** 

HPLC RELOCATION

**INCUBATOR SETUP OR RELOCATION** 

PALLET STORAGE

WATER JACKET INCUBATORS (Draining/Relocation)

WHITE GLOVE DELIVERY

**TEMPERATURE CONTROLLED STORAGE TO GMP/GIP STANDARDS** 

# **SCI-ICE**

3MM DRY ICE PELLETS- HIGH DENSITY, PICK UP AND DELIVERY 10MM DRY ICE PELLETS- HIGH DENSITY, PICK UP AND DELIVERY 16MM DRY ICE PELLETS- HIGH DENSITY, PICK UP AND DELIVERY DRY ICE BIN SALES AND RENTALS



| Scientific Ca | alibration       | Pipette, Singl | e            | Uncertainty |             |
|---------------|------------------|----------------|--------------|-------------|-------------|
| Department:   | SAMPLE           | Description:   | 20uL Pipette | 20.00 uL :  | +/- 0.21 uL |
| Contact:      | SAMPLE           | Manufacturer:  | Gilson       | 4.00 uL :   | +/- 0.16 uL |
| Phone:        | (111) 222-3333 x | Model Number:  | Classic      |             |             |
| E-Mail:       | SAMPLE           | Serial Number: | 123456       |             |             |
|               |                  | ID Number:     | N/A          |             |             |
|               |                  | Location:      | Cary, NC     |             |             |

Leak test was performed on all nosecones prior to calibration. Failure to successfully complete the leak test will result in a failure. Refer to Standard Operating Procedure SCCA-012, "Pipette Calibration", Section 6.2.6.1. See comments for any additional information.

### As Found

| Sample          | Raw   | Adjusted | Status | Raw  | Adjusted | Status |
|-----------------|-------|----------|--------|------|----------|--------|
| 1               | 20.00 | 20.08    | PASS   | 3.98 | 4.00     | PASS   |
| 2               | 20.10 | 20.18    | PASS   | 4.01 | 4.03     | PASS   |
| 3               | 20.00 | 20.08    | PASS   | 4.00 | 4.02     | PASS   |
| 4               | 19.90 | 19.98    | PASS   | 4.03 | 4.05     | PASS   |
| 5               | 20.00 | 20.08    | PASS   | 4.01 | 4.03     | PASS   |
| Mean            |       | 20.08    |        |      | 4.03     |        |
| SD              |       | 0.06     |        |      | 0.02     |        |
| Inaccuracy %CV  |       | 0.40     | PASS   |      | 0.65     | PASS   |
| Imprecision %CV |       | 0.31     | PASS   |      | 0.40     | PASS   |
|                 |       |          |        |      |          |        |

### As Left

| Sample          | Raw   | Adjusted | Status | Raw  | Adjusted | Status |
|-----------------|-------|----------|--------|------|----------|--------|
| 1               | 20.10 | 20.18    | PASS   | 4.00 | 4.02     | PASS   |
| 2               | 20.00 | 20.08    | PASS   | 4.02 | 4.04     | PASS   |
| 3               | 20.00 | 20.08    | PASS   | 4.01 | 4.03     | PASS   |
| 4               | 20.10 | 20.18    | PASS   | 3.99 | 4.01     | PASS   |
| 5               | 20.00 | 20.08    | PASS   | 4.00 | 4.02     | PASS   |
| Mean            |       | 20.12    |        |      | 4.02     |        |
| SD              |       | 0.05     |        |      | 0.01     |        |
| Inaccuracy %CV  |       | 0.60     | PASS   |      | 0.60     | PASS   |
| Imprecision %CV |       | 0.24     | PASS   |      | 0.25     | PASS   |
| Neminal Values  |       |          |        |      |          |        |

| Nominal values |             |            |             | Standards        |                 |       |              |             |
|----------------|-------------|------------|-------------|------------------|-----------------|-------|--------------|-------------|
| Nominal        | Range       | Inaccuracy | Imprecision | Description      | Manufacturer    | Model | Traceability | Recall Date |
| 20.00 uL       | +/- 0.20 uL | ≤ 1.00%    | ≤ 1.00%     | Thermohygrometer | Control Company | 4093  | SC-034-HM    | 06/2024     |
| 4.00 uL        | +/- 0.08 uL | ≤ 2.00%    | ≤ 2.00%     | Balance          | Mettler Toledo  | WXTE  | SC-008-BL    | 12/2023     |

The above referenced instrument has been calibrated using standards traceable to the National Institute of Standards and Technology (NIST) to the International System of Units (SI) through the traceability number listed herein. The uncertainty is obtained by summing in quadrature the Type A and Type B components, using a k factor of 2 with an approximate 95% confidence level. Test procedures and instrumentation meet the general guidelines for competence of calibration and testing laboratories, ISO/IEC 17025:2017. Accredited calibration documentation may contain certain measurement data that is not covered by the Scope of Accreditation. These measurements are indicated by a pound sign (#). Statements of conformity (e.g. Pass/Fail) to specifications are made without taking measurement uncertainty into account. Where statements of conformity are made in calibration documentation, the following decision rules are applied:

 $\cdot$  PASS - Results within limits/specifications

FAIL - Results exceed limits/specifications.

The calibration Interval has been specified by the customer. This report may not be reproduced except in full without the written permission of Scientific Calibration, Inc.

### Notes

Preventative Maintenance performed. No calibration adjustment required.

As Found Status: PASS As Left Status: PASS Calibration Due: 08/2024

Digitally signed by: Taylor Atwater Reason:Technician Approval Technician: Taylor Atwater Approval: Taylor Johnson oved by Quality



### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

### SCIENTIFIC CALIBRATION, INC. 14001 Weston Parkway, Suite 106 Cary, NC 27513 ody White Phone: 919-303-1212 Cody White

### CALIBRATION

Valid To: October 31, 2025

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<sup>1, 4</sup>:

### I. Chemical

| Parameter/Equipment                                | Range   | CMC <sup>2, 5</sup> (±)                    | Comments                |
|--|---|--|-------------------------|
| Conductivity –<br>Measuring Equipment <sup>3</sup> | $\approx 1 \ \mu\text{S/cm} \\\approx 1413 \ \mu\text{S/cm} \\\approx 200 \ 000 \ \mu\text{S/cm}$ | 0.67 μS/cm<br>15 μS/cm<br>1700 μS/cm       | Conductivity solutions  |
| pH – Measuring<br>Equipment <sup>3</sup>           | ≈ 4 pH<br>≈ 7 pH<br>≈ 10 pH   | 0.031 pH<br>0.022 pH<br>0.038 pH           | pH buffer solutions     |
| CO <sub>2</sub> Sensors <sup>3</sup>               | (0 to 20) % CO <sub>2</sub>   | 0.51 % CO <sub>2</sub> + 2 % of<br>Reading | % CO <sub>2</sub> meter |

(A2LA Cert. No. 5345.01) Revised 2/29/2024

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5202 Presidents Court, Suite 220 | Frederick, MD 21703-8515 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2LA.org

### II. Dimensional

| Parameter/Equipment    | Range                            | $\mathrm{CMC}^{2}\left(\pm\right)$ | Comments                |
|------------------------|----------------------------------|------------------------------------|-------------------------|
| Micrometers            | Up to 16 in                      | 0.000 12 in                        | Grade 0 gauge blocks    |
| Calipers               | Up to 16 in                      | 0.000 42 in                        | Grade 0 gauge blocks    |
| Tape Measures & Rulers | Up to 480 in<br>(480 to 1200) in | 0.063 in<br>0.089 in               | Calibrated tape measure |

### III. Fluid Quantities

| Parameter/Equipment   | Range               | CMC <sup>2, 6</sup> (±)                                     | Comments            |
|---|---------------------|---|---------------------|
| Gas Flow (Air, Helium,<br>Hydrogen, Nitrogen) –<br>Measure <sup>3</sup> | (50 to 400) ml/min  | 0.39 ml/min + Greater<br>of 2 % of reading or<br>0.2 ml/min | Restek Proflow 6000 |
|   | (2 to 10) l/min     | 0.15 l/min  | Alborg GFM17        |
|   | (40 to 200) l/min   | 3.3 l/min   | Alborg GFM57        |
| Liquid Flow (Water) –<br>Measure <sup>3</sup>                           | (0.2 to 2.0) ml/min | 1 % of reading + 0.014<br>ml/min                            | Liquid Flow Meter   |

### IV. Electrical

| Parameter/Equipment  | Range   | CMC <sup>2, 7</sup> (±)  | Comments  |
|----------------------|---|--|-----------|
| DC Voltage – Measure | Up to 100 mV<br>(>0.1 to 3) V<br>(>3 to 30) V<br>(>30 to 300) V | 0.02 % + 0.005 mV<br>0.02 % + 0.000 05 V<br>0.02 % + 0.0005 V<br>0.05 % + 0.05 V | Fluke 753 |

(A2LA Cert. No. 5345.01) Revised 2/29/2024

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| Parameter/Equipment        | Range   | CMC <sup>2, 7</sup> (±)   | Comments  |
|----------------------------|---|---|-----------|
| DC Current – Measure       | Up to 30 mA<br>(>30 to 100) mA                                  | 0.015 % + 0.005 mA<br>0.014 % + 0.02 mA   | Fluke 753 |
| DC Resistance –<br>Measure | Up to 10 Ω<br>(>10 to 100) Ω<br>(>0.1 to 1) kΩ<br>(>1 to 10) kΩ | $\begin{array}{c} 0.33 \ \% + 0.05 \ \Omega \\ 0.05 \ \% + 0.05 \ \Omega \\ 0.05 \ \% + 0.005 \ \mathrm{k}\Omega \\ 0.1 \ \% + 0.01 \ \mathrm{k}\Omega \end{array}$ | Fluke 753 |

| Parameter/Range   | Frequency  | CMC <sup>2, 7</sup> (±)                             | Comments  |
|---|--|---|-----------|
| AC Voltage – Measure<br>(>0.1 to 3) V<br>(>3 to 30) V<br>(>30 to 300) V | (40 to 500) Hz<br>(40 to 500) Hz<br>(40 to 500) Hz | 0.53 % + 0.002 V<br>0.5 % + 0.02 V<br>0.5 % + 0.2 V | Fluke 753 |

| Parameter/Equipment                                    | Range                                | CMC <sup>2</sup> , <sup>6</sup> (±) | Comments  |
|--|--------------------------------------|-------------------------------------|-----------|
| Electrical Simulation of<br>RTD - Source<br>Pt100 385  | (-200 to 100) °C<br>(>100 to 800) °C | 0.060 °C<br>0.15 °C                 | Fluke 753 |
| Electrical Simulation of<br>RTD – Measure<br>Pt100 385 | (-200 to 100) °C<br>(>100 to 800) °C | 0.10 °C<br>0.32 °C                  | Fluke 753 |

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| Parameter/Equipment                                    | Range  | CMC <sup>2, 6</sup> (±)  | Comments  |
|--|--|--|-----------|
| Electrical Simulation of<br>Thermocouples – Source     |  |  |           |
| Туре Ј<br>Туре К<br>Туре Т                             | (-210 to -100) °C<br>(>-100 to 800) °C<br>(>800 to 1200) °C<br>(-200 to -100) °C<br>(>-100 to 400) °C<br>(>400 to 1200) °C<br>(>1200 to 1372) °C<br>(-250 to -100) °C<br>(>-100 to 0) °C | 0.44 °C<br>0.40 °C<br>0.35 °C<br>0.53 °C<br>0.45 °C<br>0.39 °C<br>0.36 °C<br>1.1 °C<br>0.44 °C | Fluke 753 |
|  | (>0 to 400) °C   | 0.49 °C  |           |
| Electrical Simulation of<br>Thermocouples –<br>Measure |  |  |           |
| Туре Ј   | (-210 to -100) °C<br>(>-100 to 800) °C<br>(>800 to 1200) °C  | 0.67 °C<br>0.45 °C<br>0.53 °C  | Fluke 753 |
| Туре К   | (-200 to -100) °C<br>(>-100 to 400) °C<br>(>400 to 1200) °C<br>(>1200 to 1372) °C  | 0.75 °C<br>0.38 °C<br>0.53 °C<br>0.72 °C   |           |
| Туре Т   | (-250 to -100) °C<br>(>-100 to 0) °C<br>(>0 to 400) °C   | 1.7 °C<br>0.63 °C<br>0.49 °C   |           |

### V. Mechanical

| Parameter/Equipment                                 | Range  | $\mathrm{CMC}^{2}\left(\pm\right)$                      | Comments        |
|---|--|---|-----------------|
| Scales, Balances &<br>Weighing Systems <sup>3</sup> | (0.002 to 0.5) g<br>(0.5 to 5) g<br>(5 to 20) g<br>(20 to 50) g<br>(50 to 100) g<br>(100 to 150) g | 23 μg<br>47 μg<br>91 μg<br>0.14 mg<br>0.3 mg<br>0.44 mg | Class 1 weights |

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| Parameter/Equipment   | Range   | $\mathrm{CMC}^{2}\left(\pm ight)$   | Comments                          |
|---|---|---|-----------------------------------|
| Scales, Balances &<br>Weighing Systems <sup>3</sup><br>(cont) | (150 to 200) g<br>(200 to 500) g<br>(500 to 1000) g   | 0.6 mg<br>3.9 mg<br>4.6 mg  | Class 1 weights                   |
|   | (1 to 100) g<br>(100 to 200) g<br>(200 to 500) g<br>500 g to 1 kg<br>(1 to 2) kg<br>(2 to 5) kg   | 1.9 mg<br>2.8 mg<br>6.1 mg<br>12 mg<br>24 mg<br>59 mg   | Class 3 weights                   |
|   | Up to 300 lbs<br>(>300 to 600) lbs<br>10 kg<br>25 kg  | 0.04 lbs<br>0.08 lbs<br>1.2 g<br>3.0 g  | Class 6 weights                   |
| Pipettes <sup>3</sup>   | (0.1 to 1) µL   | 0.026 μL  | Sartorius Cubis MP6.6S            |
|   | <ul> <li>(1 to 20) μL</li> <li>(20 to 50) μL</li> <li>(50 to 100) μL</li> <li>(100 to 200) μL</li> <li>(200 to 300) μL</li> <li>(300 to 1000) μL</li> <li>(1 to 2) mL</li> <li>(2 to 5) mL</li> <li>(5 to 10) mL</li> <li>(10 to 25) mL</li> <li>(25 to 50) mL</li> <li>(50 to 100) mL</li> </ul> | 0.12 μL<br>0.16 μL<br>0.51 μL<br>0.63 μL<br>0.96 μL<br>3.8 μL<br>10 μL<br>13 μL<br>32 μL<br>68 μL<br>0.14 mL<br>0.59 mL | Gravimetric – Balance,<br>Weights |
|   |   | 2.6   |                                   |

| Parameter/Equipment   | Range   | CMC <sup>2, 6</sup> (±)                     | Comments                          |
|-----------------------|---|---|-----------------------------------|
| Titrator <sup>3</sup> | (25 to 1000) μL<br>(1000 to 5000) μL<br>(5000 to 10 000) μL<br>(10 000 to 20 000) μL<br>(20 000 to 50 000) μL | 4.5 μL<br>13 μL<br>25 μL<br>50 μL<br>150 μL | Gravimetric – balance,<br>weights |

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| Parameter/Equipment                                     | Range   | CMC <sup>2, 6</sup> (±)  | Comments   |
|---|---|--|--|
| Pressure & Vacuum –<br>Measuring Equipment <sup>3</sup> | Up to 300 psi<br>Up to 500 psi<br>(-30 to 30) inH <sub>2</sub> O<br>(-29.5 to 0) inHg | 0.068 psi<br>0.31 psi<br>0.013 inH <sub>2</sub> O<br>0.16 inHg | Additel 760<br>Fluke 750P07<br>Additel 760 DP30<br>Ashcroft DG25 |
| Force Measuring<br>Equipment – Tension &<br>Compression | (0.5 to 5) lbf<br>(230 to 2300) gf<br>(10 to 100) lbf<br>(4500 to 45 000) gf          | 0.015 lbf<br>6.8 gf<br>0.30 lbf<br>140 gf                      | Mark-10 MR03-5<br>Mark-10 MR03-100                               |
| Torque – Measure  | (5 to 50) lbf·in<br>(5.8 to 58) kgf·cm<br>(20 to 200) lbf·in<br>(23 to 230) kgf·cm    | 0.27 lbf·in<br>0.31 kgf·cm<br>1.7 lbf·in<br>2.0 kgf·cm         | Mark-10 MR52-50<br>Mark-10 MR55-200                              |

### VI. Thermodynamics

| Parameter/Equipment        | Range   | $\mathrm{CMC}^{2}\left(\pm ight)$        | Comments  |
|----------------------------|---|--|---|
| Digital Thermometers       | (-196 to -86) °C<br>(-86 to 0) °C<br>(0 to 140) °C<br>(140 to 400) °C | 0.074 °C<br>0.086 °C<br>0.1 °C<br>0.1 °C | Hart 1502A<br>Thermometer,<br>Fluke 5615 probe  |
| LIG Thermometers           | (-86 to 0) °C<br>(0 to 140) °C  | 0.59 °C<br>0.6 °C                        | Fluke 1524<br>Thermometer,<br>Fluke 5623B probe |
| Thermocyclers <sup>3</sup> | (0 to 95) °C  | 0.69 °C                                  | Quanta Biotech TAS<br>System                    |

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| Parameter/Equipment   | Range   | $\mathrm{CMC}^{2}\left(\pm\right)$                                 | Comments  |  |
|---|---|--|---|--|
| Environmental<br>Temperature (Freezers,<br>Incubators, HPLC,<br>Refrigerators, Ovens,<br>Furnaces, & GC) <sup>3</sup> | (-86 to -10) °C<br>(0 to 10) °C<br>(10 to 50) °C<br>(30 to 400) °C<br>(400 to 1000) °C<br>(-80 to 130) °C | 2.1 °C<br>1.6 °C<br>1.5 °C<br>1.9 °C<br>0.45 % + 0.5 °C<br>0.28 °C | Fluke 54 II<br>w/Thermocouple<br>Kave XC5FVP40-RT |  |
|   | (0000000)   | 0.20   | 11wj • 12001 · 1 · 0 · 122                        |  |
|   |   |  |   |  |
| <u> </u>  | <u> </u>  | [  |   |  |
| Parameter/Equipment   | Range   | CMC <sup>2, 6</sup> (±)  | Comments  |  |
| Parameter/Equipment<br>Relative Humidity –  | Range<br>(0 to 90) % RH   | CMC <sup>2, 6</sup> (±)<br>1.3 % RH                                | Comments<br>Vaisala MI70 HMP 77B                  |  |
| Parameter/Equipment<br>Relative Humidity –<br>Measuring Equipment <sup>3</sup>  | Range<br>(0 to 90) % RH<br>(15 to 90) % RH  | CMC <sup>2, 6</sup> (±)<br>1.3 % RH<br>2.5 % RH                    | Comments<br>Vaisala MI70 HMP 77B<br>Kaye X2520-RT |  |

### VII. Time & Frequency

| Parameter/Equipment                | Range  | CMC <sup>2, 5, 6</sup> (±)                         | Comments                                |
|------------------------------------|--|--|---|
| Frequency – Measure                | (1 to 110) Hz<br>(>0.11 to 1.1) kHz<br>(>1.1 to 22) kHz<br>(>22 to 50) kHz                         | 0.064 Hz<br>0.51 Hz<br>0.0070 kHz<br>0.051 kHz     | Fluke 753                               |
| Frequency – Measuring<br>Equipment | Up to 10.99 Hz<br>(11 to 109.99 Hz)<br>(110 to 1099.99 Hz)<br>(1.1 to 21.99 kHz)<br>(22 to 50 kHz) | 0.007 Hz<br>0.05 Hz<br>0.43 Hz<br>14 kHz<br>17 kHz | Fluke 753                               |
| Centrifuges <sup>3</sup>           | (100 to 100 000) RPM   | 1.8 RPM + 0.01 %                                   | Monarch PLT-200<br>laser tachometer     |
| Stopwatches / Timers               | (30 to 72 000) s   | 23 ms  | Counter, stopwatch, frequency generator |

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- <sup>1</sup> This laboratory offers commercial calibration service and field calibration service.
- <sup>2</sup> 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.
- <sup>3</sup> Field calibration service is available for this calibration. 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.

<sup>4</sup> This scope meets A2LA's *P112 Flexible Scope Policy*.

<sup>5</sup> In the statement of CMC, the percentage given is the percentage of the reading, unless otherwise noted.

<sup>6</sup> The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

<sup>7</sup> The stated measured values are determined using the indicated instrument (see Comments). This capability is suitable for the calibration of the devices intended to measure or generate the measured value in the ranges indicated. CMC's are expressed as either a specific value that covers the full range or as a percent or fraction of the reading plus a fixed floor specification.

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# **Accredited Laboratory**

A2LA has accredited

# SCIENTIFIC CALIBRATION, INC. Cary, NC

for technical competence in the field of

# Calibration

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



Presented this 16<sup>th</sup> day of October 2023.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council Certificate Number 5345.01 Valid to October 31, 2025 Revised February 29, 2024

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







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