CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

SiteCal, Inc.
9975 Flanders Ct. NE
Blaine, Minnesota 55449

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

Jason Stine, Vice President

Expiry Date: 04 May 2026

Certificate Number: AC-1452

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. 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).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

SiteCal, Inc.
9975 Flanders Ct. NE
Blaine, Minnesota 55449
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CALIBRATION

Valid to: **May 4, 2026** Certificate Number: **AC-1452**

Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
CO_2 Measurement [1]	1 % 5 % 10 %	0.4 % 0.4 % 0.5 %	GD444 CO2 Analyzer
CO_2 Analyzer	1 % 5 % 10 %	0.3 % 0.3 % 0.4 %	Certified gases

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Micrometers [1]	Up to 1 in	75 µin	Gage Blocks
Calipers [1]	Up to 12 in (12.1 to 24) in	770 µin 740 µin	Gage Blocks
Pin and Plug Gages	Up to 0.03 in (0.04 to 4) in (4 to 6) in	11 µin 37 µin 54 µin	Gage Blocks LabMaster Universal

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Gage Block	Up to 0.05 in (0.05 to 0.5) in (0.5 to 1) in (1 to 2) in (2 to 3) in (3 to 4) in (4 to 6) in	4.6 µin 6.2 µin 9.5 µin 18 µin 26 µin 27 µin 51 µin	Gage Blocks LabMaster Universal
Ring Gage	Up to 0.5 in (0.5 to 1) in (1 to 3) in	6.2 µin 12 µin 27 µin	Gage Blocks LabMaster Universal
Thread Plug Gage Major Diameter Pitch	(4 to 80) TPI Up to 4 in Up to 4 in	 38 µin 81 µin	Gage Blocks LabMaster Universal Thread Measuring Wires

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pressure Gages [1]	Up to 15 psiv (-1 to 1) inH_2O @ 20°C (-5 to 5) inH_2O @ 20°C (-7.5 to 7.5) inH_2O @ 20°C Up to 5 psig (5 to 60) psig (60 to 200) psig (200 to 500) psig (500 to 3 000) psig (3 000 to 7 500) psig	0.005 5 psiv 0.0015 inH_2O 0.0073 inH_2O 0.011 inH_2O 0.003 1 psig 0.027 psi 0.072 psi 0.19 psi 1.1 psi 5.5 psi	Pressure Indicator and Modules
Laboratory Balance / Scale [1] (0.001 mg resolution)	0 to 5 g	0.044 mg	Class 1 Weights
(0.01 mg resolution)	0 to 62 g 0 to 300 g	0.25 mg 0.88 mg	
(0.1 mg resolution)	0 to 1 000 g	2.9 mg	
(0.01 g resolution)	0 to 6 000 g	120 mg	
(0.1 g resolution)	0 to 15 000 g	0.24 g	
(1 g resolution)	0 to 35 000 g	2.4 g	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Industrial Scale [1] (0.01 kg resolution)	0 to 100 kg	0.012 kg	Class F Weights
(0.1 kg resolution)	0 to 250 kg	0.12 kg	
Pipettes	(0.2 to 100) µL (100 to 1 000) µL 1000 µL to 20 mL	0.052 µL 0.43 µL 1.8 µL	Laboratory Balance

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature – Measure and Source[1]	(-196 to 0) °C (0 to 50) °C (50.1 to 100) °C (100.1 to 200) °C (200.1 to 300) °C	0.039 °C 0.036 °C 0.039 °C 0.041 °C 0.048°C	Hart 1502A w/SPRT
Temperature-measure Thermocouples [1] Type J Type K Type T Type E	 (-196 to 400) °C (-196 to 400) °C (-196 to 400) °C (-196 to 400) °C	 0.13 °C 0.16 °C 0.15 °C 0.12 °C	Ectron 1140A
Humidity Device Calibration	(5 to 95) % RH	0.74 % RH	Dew Point Hygrometer
Humidity Measurement [1]	(0 to 90) % (90 to 100) %	1.9% RH 2.7% RH	Vaisala RH Meter

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage – Source	Up to 330 mV 330 mV to 3.29 V (3.3 to 32.9) V (33 to 329) V (330 to 1000) V	0.009 mV 0.045 mV 0.49 mV 6.5 mV 23 mV	Fluke 5522A
DC Voltage – Measure	Up to 100 mV 100 mV to 1 V (1 to 10) V (10 to 100) V (100 to 1000) V	0.009 3 mV 0.005 8 mV 0.055 mV 0.78 mV 8.4 mV	HP 3458A Option 2
DC Current – Source	Up to 330 µA 330 µA to 3.3 mA (3.2 to 33) mA (33 to 330) mA 330 mA to 1.1 A (1.1 to 3.0) A (3.0 to 11) A (11 to 20.5) A	0.081 µA 0.45 µA 0.004 2 mA 0.042 mA 0.000 26 A 0.001 4 A 0.006 4 A 0.024 A	Fluke 5522A
DC Current – Measure	Up to 100 µA 100 µA to 1 mA (1 to 10) mA (10 to 100) mA 100 mA to 1 A (1 to 5) A (5 to 10) A (10 to 20) A	0.003 4 µA 0.000 03 mA 0.000 32 mA 0.004 9 mA 0.000 14 A 0.16 A 0.002 3 A 0.002 3 A	HP 3458A Option 2 (Values over 1A shunted) Agilent 34330A Shunt
AC Voltage – Source	Up to 33 mV Up to 10 Hz (10 to 45) Hz 45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 450) kHz	 0.038 mV 0.038 mV 0.013 mV 0.013 mV 0.015 mV 0.046 mV 0.15 mV 0.37 mV	Fluke 5522A

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Source	33 to 330 mV		Fluke 5522A
	Up to 10 Hz	0.051 mV	
	(10 to 45) Hz	0.061 mV	
	45 Hz to 1 kHz	0.029 mV	
	(1 to 10) kHz	0.029 mV	
	(10 to 20) kHz	0.031 mV	
	(20 to 50) kHz	0.053 mV	
	(50 to 100) kHz	0.14 mV	
	(100 to 500) kHz	0.33 mV	
	0.33 to 3.3 V		
	Up to 10 Hz	1.3 mV	
	(10 to 45) Hz	1.3 mV	
	45 Hz to 1 kHz	0.65 mV	
	(1 to 10) kHz	0.65 mV	
	(10 to 20) kHz	0.8 mV	
	(20 to 50) kHz	1.2 mV	
	(50 to 100) kHz	2.9 mV	
	(100 to 450) kHz	10.0 mV	
	3.3 to 33 V		
	Up to 10 Hz	13 mV	
	(10 to 45) Hz	13 mV	
	45 Hz to 1 kHz	6.5 mV	
	(1 to 10) kHz	6.5 mV	
	(10 to 20) kHz	9.9 mV	
	(20 to 50) kHz	15 mV	
	(50 to 90) kHz	37 mV	
	33 to 330 V		
	Up to 45 Hz	76 mV	
	45 Hz to 1 kHz	76 mV	
	(1 to 10) kHz	84 mV	
	(10 to 20) kHz	110 mV	
	(20 to 50) kHz	42 mV	
	(50 to 100) kHz	150 mV	
	330 to 1000 V		
	Up to 45 Hz	360 mV	
	45 Hz to 1 kHz	360 mV	
	(1 to 5) kHz	310 mV	
	(5 to 10) kHz	360 mV	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage - Measure	Up to 10 mV		HP 3458A Option 2
	Up to 20 Hz	0.084 mV	
	(20 to 40) Hz	0.047 mV	
	(40 to 100) Hz	0.036 mV	
	100 Hz to 20 kHz	0.032 mV	
	(20 to 50) kHz	0.047 mV	
	(50 to 100) kHz	0.13 mV	
	(100 to 250) kHz	0.55 mV	
	(10 to 100) mV		
	Up to 20 Hz	0.49 mV	
	(20 to 40) Hz	0.2 mV	
	(40 to 100) Hz	0.081 mV	
	100 Hz to 20 kHz	0.035 mV	
	(20 to 50) kHz	0.22 mV	
	(50 to 100) kHz	0.79 mV	
	(100 to 300) kHz	2.9 mV	
	300 kHz to 1 MHz	8.1 mV	
	(1 to 2) MHz	18 mV	
	100 mV to 1 V		
	Up to 20 Hz	4.9 mV	
	(20 to 40) Hz	2 mV	
	(40 to 100) Hz	0.81 mV	
	100 Hz to 20 kHz	0.35 mV	
	(20 to 50) kHz	2.2 mV	
	(50 to 100) kHz	7.9 mV	
	(100 to 300) kHz	29 mV	
	(300 to 500) kHz	42 mV	
	500 kHz to 1 MHz	81 mV	
	(1 to 2) MHz	180 mV	
	(1 to 10) V		
	Up to 20 Hz	49 mV	
	(20 to 40) Hz	20 mV	
	(40 to 100) Hz	8.1 mV	
	100 Hz to 20 kHz	3.5 mV	
	(20 to 50) kHz	22 mV	
	(50 to 100) kHz	79 mV	
	(100 to 300) kHz	290 mV	
	300 kHz to 1 MHz	810 mV	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage - Measure	(10 to 100) V		HP 3458A Option 2
	Up to 20 Hz	0.49 V	
	(20 to 40) Hz	0.2 V	
	(40 to 100) Hz	0.082 V	
	100 Hz to 20 kHz	0.047 V	
	(20 to 50) kHz	0.22 V	
	(50 to 100) kHz	0.79 V	
	(100 to 300) kHz	2.9 V	
	300 kHz to 1 MHz	8.1 V	
	(100 to 1 000) V		
	Up to 40 Hz	2.3 V	
	(40 to 100) Hz	1.2 V	
	100 Hz to 20 kHz	0.93 V	
	(20 to 50) kHz	2.2 V	
	(50 to 100) kHz	9.3 V	
AC Current - Source	Up to 330 µA		Fluke 5522A
	Up to 10 Hz	0.88 µA	
	(10 to 45) Hz	0.69 µA	
	45 Hz to 1 kHz	0.6 µA	
	(1 to 5) kHz	1.4 µA	
	(5 to 10) kHz	3.3 µA	
	(10 to 30) kHz	6.6 µA	
	330 µA to 3.3 mA		
	Up to 10 Hz	0.008 2 mA	
	(10 to 45) Hz	0.005 3 mA	
	45 Hz to 1 kHz	0.004 0 mA	
	(1 to 5) kHz	0.007 9 mA	
	(5 to 10) kHz	0.02 mA	
	(10 to 30) kHz	0.039 mA	
	(3.3 to 33) mA		
	Up to 10 Hz	0.071 mA	
	10 Hz to 1 kHz	0.16 mA	
	(1 to 5) kHz	0.31 mA	
	(5 to 10) kHz	0.08 mA	
	(10 to 30) kHz	0.16 mA	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current - Source	(33 to 330) mA		Fluke 5522A
	Up to 10 Hz	1.6 mA	
	(10 to 45) Hz	0.6 mA	
	45 Hz to 1 kHz	0.26 mA	
	(1 to 5) kHz	0.18 mA	
	(5 to 10) kHz	0.35 mA	
	(10 to 30) kHz	1.8 mA	
	(0.33 to 1.1) A		
	Up to 10 Hz	7.1 mA	
	(10 to 45) Hz	5.2 mA	
	45 Hz to 1 kHz	2.2 mA	
	(1 to 5) kHz	2.2 mA	
	(5 to 10) kHz	7.1 mA	
	(1.1 to 3) A		
	Up to 10 Hz	11 mA	
	(10 to 45) Hz	35 mA	
	45 Hz to 1 kHz	0.83 mA	
	(1 to 5) kHz	1.9 mA	
	(5 to 10) kHz	6.5 mA	
	(3 to 11) A		
	Up to 45 Hz	11 mA	
	(45 to 65) Hz	10 mA	
	(65 to 500) Hz	16 mA	
	500 Hz to 1 kHz	16 mA	
	(1 to 5) kHz	390 mA	
	(11 to 20.5) A		
	Up to 45 Hz	35 mA	
	(45 to 65) Hz	35 mA	
	(65 to 500) Hz	42 mA	
	500 Hz to 1 kHz	42 mA	
	(1 to 5) kHz	720 mA	
AC Current - Measure	Up to 100 µA		HP 3458A Opt 2 w/ Agilent 34330A Current Shunt for values over 1 A
	Up to 20 Hz	0.5 µA	
	(20 to 45) Hz	0.21 µA	
	(45 to 100) Hz	0.11 µA	
	100 Hz to 1 kHz	0.11 µA	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current - Measure	100 µA to 100 mA		HP 3458A Opt 2 w/ Agilent 34330A Current Shunt for values over 1 A
	Up to 20 Hz	0.49 mA	
	(20 to 45) Hz	0.2 mA	
	(45 to 100) Hz	0.094 mA	
	100 Hz to 5 kHz	0.061 mA	
	(5 to 20) kHz	0.51 mA	
	(20 to 50) kHz	0.81 mA	
	(50 to 100) kHz	0.81 mA	
	100 mA to 1 A		
	Up to 20 Hz	0.016 A	
	(20 to 45) Hz	0.006 6 A	
	(45 to 100) Hz	0.017 A	
	100 Hz to 5 kHz	0.018 A	
	(5 to 20) kHz	0.007 3 A	
	(1 to 5) A		
	Up to 1 kHz	0.17 A	
	(1 to 5) kHz	0.17 A	
	(5 to 10) A		
	Up to 1 kHz	0.029 A	
	(1 to 5) kHz	0.15 A	
	(10 to 20) A		
	Up to 1 kHz	0.012 A	
	(1 to 5) kHz	0.15 A	
Resistance - Source	Up to 10 Ω	0.012 Ω	Fluke 5522A
	(10 to 100) Ω	0.004 9 Ω	
	100 Ω to 1.0 kΩ	0.000 095 kΩ	
	(1.0 to 10.0) kΩ	0.003 5 kΩ	
	(10.0 to 100.0) kΩ	0.003 5 kΩ	
	100.0 kΩ to 1.0 MΩ	0.000 04 MΩ	
	(1.0 to 10.0) MΩ	0.000 99 MΩ	
	(10.0 to 100.0) MΩ	0.02 MΩ	
	100.0 to 1.0 GΩ	0.004 3 GΩ	
Resistance - Sense	Up to 10.0 Ω	0.000 26 Ω	HP 3458A Option 2
	(10.0 to 100.0) Ω	0.002 2 Ω	
	100.0 Ω to 1.0 kΩ	0.007 1 Ω	
	(1.0 to 10.0) kΩ	0.000 13 kΩ	
	(10.0 to 100.0) kΩ	0.001 5 kΩ	
	100.0 kΩ to 1.0 MΩ	0.000 023 MΩ	
	(1.0 to 10.0) MΩ	0.000 74 MΩ	
	(10.0 to 100.0) MΩ	0.06 MΩ	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Temperature Simulation Type B	(600 to 800) °C (800 to 1 000) °C (1 000 to 1 550) °C (1 550 to 1 820) °C	0.38 °C 0.31 °C 0.27 °C 0.30 °C	Fluke 5522A
Type E	(-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1 000) °C	0.41 °C 0.18 °C 0.17 °C 0.18 °C 0.21 °C	
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1 200) °C	0.25 °C 0.18 °C 0.17 °C 0.18 °C 0.22 °C	
Type K	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1 000) °C (1 000 to 1 372) °C	0.29 °C 0.19 °C 0.18 °C 0.24 °C 0.34 °C	
Electrical Temperature Simulation Type N	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 410) °C (410 to 1 300) °C	0.34 °C 0.21 °C 0.19 °C 0.19 °C 0.25 °C	Fluke 5522A
Type R	(0 to 250) °C (250 to 400) °C (400 to 1 000) °C (1 000 to 1767) °C	0.47 °C 0.31 °C 0.30 °C 0.34 °C	
Type S	(0 to 250) °C (250 to 1000) °C (1 000 to 1 400) °C (1 400 to 1 767) °C	0.40 °C 0.32 °C 0.32 °C 0.39 °C	
Type T	(-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.51 °C 0.22 °C 0.18 °C 0.17 °C	

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
RPM Measurement [1]	(6 to 8 300) RPM (8 300 to 19 000) RPM	2.1 RPM 3.2 RPM	Shimpo Tachometer
Optical Tachometer	(6 to 600) RPM (600 to 100 000) RPM	0.17 RPM 1.2 RPM	Agilent 53181A
Frequency Measure	Up to 1MHz 1 MHz to 100 MHz 100 MHz to 200 MHz 200 MHz to 225 MHz	0.0022 Hz 0.071 Hz 0.14 Hz 0.16 Hz	Agilent 53181A
Frequency Source	Up to 119 Hz 119 Hz to 1199 Hz 1199 Hz to 11.99 kHz 11.99 kHz to 119.99 kHz 119.99 kHz to 500 kHz	0.00032 Hz 0.003 Hz 0.034 Hz 0.3 Hz 1.3 Hz	Fluke 5522A w/ Agilent 53181A

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 (k=2), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1452.

Jason Stine, Vice President