



# CERTIFICATE OF ACCREDITATION

**The ANSI National Accreditation Board**

Hereby attests that

**Gerhart**

**603 Washington Avenue  
South Amboy, NJ 08879**

Fulfills the requirements of

**ISO/IEC 17025:2017**

and national standard

**ANSI/NCSL Z540-1-1994 (R2002)**

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](http://www.anab.org).

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 01 October 2024

Certificate Number: AC-1345



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  
AND  
ANSI/NCSL Z540-1-1994 (R2002)**

**Gerhart**  
603 Washington Avenue  
South Amboy, NJ 08879  
Stuart Cattell (President), Carol Rendfrey (Quality Manager), John J. Smith (Lab Manager)  
732-525-1000

**CALIBRATION**

Valid to: **October 1, 2024**

Certificate Number: **AC-1345**

**Mass and Mass Related**

<b>Parameter/Equipment</b>	<b>Range</b>	<b>Expanded Uncertainty of Measurement (+/-)</b>	<b>Reference Standard, Method, and/or Equipment</b>
Mass Artifacts – Laboratory and Test	5 000 g	0.85 mg	ASTM E617 Class 1 Weights, OIML Class E <sub>1</sub> Weights, Sartorius CCE5004 Balance, Sartorius CC310 Balance, Sartorius MC21S Micro Balance, Sartorius CCE6 Mass Comparator
	3 000 g	0.37 mg	
	2 000 g	0.37 mg	
	1 000 g	0.12 mg	
	500 g	0.24 mg	
	300 g	29 µg	
	200 g	25 µg	
	100 g	19 µg	
	50 g	15 µg	
	30 g	15 µg	
	20 g	6.8 µg	
	10 g	6.7 µg	
	5 g	3.9 µg	
	3 g	2.4 µg	
	2 g	1.9 µg	
	1 g	1.5 µg	
	500 mg	0.99 µg	
	300 mg	0.87 µg	
	200 mg	0.61 µg	
	100 mg	0.61 µg	
50 mg	0.59 µg		
30 mg	0.71 µg		
20 mg	0.49 µg		
10 mg	0.53 µg		

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Mass Artifacts – Laboratory and Test	5 mg 3 mg 2 mg 1 mg	0.55 µg 0.62 µg 0.45 µg 0.45 µg	ASTM E617 Class 1 Weights, OIML Class E <sub>1</sub> Weights, Sartorius CCE6 Mass Comparator
Mass Artifacts – NIST Class F Commercial Test Weights	25 kg 20 kg 10 kg  50 lb 25 lb 20 lb 10 lb 5 lb 1 lb	11 mg 11 mg 2.8 mg  3 mg 98 mg 2 mg 0.47 mg 0.35 mg 0.12 mg	ASTM E617 Class 1 Weights, ASTM E617 Class 2 Weights, Sartorius CCE40K3 Balance, Sartorius CCE5004 Balance
Laboratory Balances <sup>1</sup> (0.001 mg resolution)	Up to 5 g	5 µg	ASTM E617 Class 1 Weights, internal procedure WI 5.4 and NIST Handbook 44 utilized in the calibration of the weighing system.
(0.01 mg resolution)	Up to 200 g	20 µg	
(0.1 mg resolution)	Up to 500 g	0.1 mg	
Top Loading Balances <sup>1</sup> (0.001 g resolution)	Up to 1 000 g	1 mg	ASTM E617 Class 2 Weights, internal procedure WI 5.4 and NIST Handbook 44 utilized in the calibration of the weighing system.
(0.01 g resolution)	Up to 5 000 g	10 mg	
(0.1 g resolution)	Up to 20 000 g	0.1 g	
Industrial Scales <sup>1</sup> (0.01 lb resolution)	Up to 500 lb	0.006 lb	NIST Class F Weights and NIST Handbook 44 utilized in the calibration of the weighing system.
(0.1 lb resolution)	Up to 500 lb	0.06 lb	
(0.5 lb resolution)	Up to 3 000 lb	0.4 lb	
(1 lb resolution)	Up to 5 000 lb	0.6 lb	
(2 lb resolution)	Up to 10 000 lb	1.2 lb	

### Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Heavy Capacity Scales <sup>1</sup> (5 lb resolution)	Up to 30 000 lb	3 lb	NIST Class F Weights and NIST Handbook 44 utilized in the calibration of the weighing system.
(10 lb resolution)	Up to 90 000 lb	6 lb	
(20 lb resolution)	Up to 200 000 lb	12 lb	
Pressure Devices	(150 to 1 500) psig (1 500 to 15 000) psig	0.06 % of reading + 0.08 psi 0.13 % of reading + 0.17 psi	Ametek T-150 Deadweight Tester

### Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature – Source	(-20 to 100) °C	0.12 °C	Hart Temperature Probe, Bath
	(20 to 350) °C	0.12 °C	Hart Temperature Probe, Dry-block

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. Gerhart has resident technicians in Painted Post, NY; Tatamy, PA; Newark, DE; and Pennsauken, NJ.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1345.



R. Douglas Leonard Jr., VP, PILR SBU