

# CERTIFICATE OF ACCREDITATION

# The ANSI National Accreditation Board

Hereby attests that

## Pipettes.com, A Transcat Company 5310 South Laburnum Avenue Henrico, VA 23231

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 <a href="https://www.anab.org">www.anab.org</a>.

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R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 07 September 2023 Certificate Number: AC-2489.18





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

## **Pipettes.com, A Transcat Company**

5310 South Laburnum Avenue Henrico, VA 23231 Chadrick Cole 804-222-5833

### **CALIBRATION**

Valid to: September 7, 2023 Certificate Number: AC-2489.18

#### **Mass and Mass Related**

Version 004 Issued: August 4, 2022

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pipettes, Dilutors, Dispensers, Repeaters, Syringes <sup>1</sup>	(0.2 to 0.5) μL (0.5 to 1) μL (1 to 2.5) μL (2.5 to 5) μL (5 to 10) μL (50 to 100) μL (100 to 200) μL (200 to 500) μL (500 to 1 000) μL (1 000 to 2 500) μL (2 500 to 5 000) μL (2 500 to 5 000) μL (5 000 to 10 000) μL (5 000 to 10 000) μL	20 nL 40 nL 38 nL 39 nL 47 nL 49 nL 0.18 μL 0.24 μL 1.5 μL 1.7 μL 4.4 μL 8 μL 20 μL 56 μL 77 μL	Analytical Balances, ASTM E617 Class 1 Weights; BTS-SOP-002
Balances <sup>1,2</sup> Bench Scales <sup>1,2</sup> Avoirdupois	Up to 500 mg 500 mg to 5 g (5 to 10) g (10 to 20) g 20 g to 5 kg (5 to 10) kg (10 to 50) kg  (0.1 to 11) lb (11 to 22) lb (22 to 50) lb	6 μg 21 μg 32 μg 49 μg 0.000 19 % of reading 0.000 15 % of reading 0.000 12 % of reading 0.000 26 % of reading 0.000 2 % of reading	Characterized ASTM E617 Class 1 weights and internal procedure BTS-SOP-003 utilized in the calibration of the weighing system.  ASTM E617 Class 1 weights, NIST Handbook 44, and internal procedure BTS-SOP-003 utilized in the calibration of the





#### **Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Floor Scales <sup>1,2</sup> Avoirdupois	(25 to 675) lb	0.012 % of reading	NIST Class F weights, NIST Handbook 44,
Avoildupois	(675 to 750) lb	0.011 % of reading	and internal procedure
	(750 to 4 250) lb	0.01 % of reading	BTS-SOP-003 utilized in the calibration of the weighing system.

#### Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature – Generate/Measure <sup>1</sup>	(-80 to -30) °C	0.07 °C	Fluke 1529 Chub-E4
	(-30 to 0) °C	0.05 <mark>6</mark> °C	Thermometer Readout,
	(0 to 125) °C	0.0 <mark>57</mark> °C	Hart Scientific 5615 SPRT,
	(125 to 350) °C	0.13 °C	Fluke 1560 Black Stack

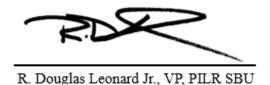
### **Time and Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Centrifuge Rate of Rotation <sup>1</sup>	(500 to 2 200) rpm (2 200 to 5 000) rpm (5 000 to 12 000) rpm (12 000 to 24 000) rpm	4 rpm 8 rpm 20 rpm 40 rpm	Optical Tachometer
Stopwatches, Timers <sup>1</sup>	Up to 1 d	58 ms/d	Helmut Klein TM 4500 Timometer

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.
- The CMC for scales and balances is highly dependent upon the resolution of the unit under test. The CMC presented here does not include the resolution of the unit under test. The resolution will be included in the reported measurement uncertainty at the time of calibration.
- 3. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-2489.18.



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