

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Transcat – Pipettes, Milford 113 Cedar Street Milford, MA 01757

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: 07 September 2025 Certificate Number: AC-2489.22





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Transcat – Pipettes, Milford

113 Cedar Street Milford, MA 01757 Aubrey Carr 800-242-6022

CALIBRATION

Valid to: September 7, 2025 Certificate Number: AC-2489.22

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
	$(0.1 \text{ to } 1) \mu l$	17 nL	
	(1 to 10) μl	20 nL	
	(10 to 20) μl	20 nL	
	(20 to 100) μl	70 nL	
Pipettes, Burettes, Diluters,	(100 to 200) μl	0.11 μL	Gravimetric method per
Dispensers, Repeaters,	(200 to 500) µl	0.3 μL	ISO 8655 using
Syringes, Controllers, Fillers	(0.5 to 1) ml	0.4 μL	Electronic Balances.
	(1 to 5) ml	6.9 μL	
	(5 to 10) ml	8.4 μL	
	(10 to 50) ml	-13 μL	
	(50 to 100) ml	21 μL	





Services performed by Field Services

113 Cedar Street Milford, MA 01757

Mass and Mass Related

Version 006 Issued: September 28, 2023

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
	$(0.2 \text{ to } 0.5) \mu L$	20 nL	
	$(0.5 \text{ to } 1) \mu L$	40 nL	
	$(1 \text{ to } 2.5) \mu L$	38 nL	
	$(2.5 \text{ to } 5) \mu L$	39 nL	
	(5 to 10) μL	47 nL	
	(10 to 50) μL	49 nL	Analytical Balances,
Pipettes, Burettes, Diluters,	(50 to 100) μL	0.18 μL	ASTM E617 Class 1
Dispensers, Repeaters,	(100 to 200) μ L	0.24 μL	Weights;
Syringes 1	(200 to 500) μL	1.5 μL	BTS-SOP-002
	(500 to 1 000) μL	1.7 μL	1 212 231 332
	(1 000 to 2 500) μL	4.4 μL	
	(2 500 to 5 000) μL	8 μL	
	(5 000 to 10 000) μL	20 μL	
!	(10 000 to 50 000) μL	56 μL	
	(50 000 to 100 000) μL	77 μL	
	Up to 500 mg	6 μg	
	500 mg to 5 g	21 μg	ASTM E617 Class 1
Balances 1,2	(5 to 10) g	32 μg	Weights and internal
(SI)	(10 to 20) g	49 μg	procedure utilized in
(51)	20 g to 5 kg	0.000 19 % of reading	the calibration of the
	(5 to 10) kg	0.000 15 % of reading	weighing system.
	(10 to 50) kg	0.000 12 % of reading	
Bench Scales 1,2			
SI	50 g to 5 kg	0.000 31 % of reading	ASTM E617
	(5 to 10) kg	0.000 23 % of reading	Class 1 Weights,
	(10 to 50) kg	0.000 2 % of reading	NIST Handbook 44
			and internal procedure
Avoirdupois	(0.1 to 11) lb	0.000 31 % of reading	utilized in the calibration
	(11 to 22) lb	0.000 26 % of reading	of the weighing system.
	(22 to 50) lb	0.000 2 % of reading	
			NIST Class F Weights,
Floor Scales 1,2	(25 to 675) lb	0.012 % of reading	NIST Handbook 44
(Avoirdupois)	(675 to 750) lb	0.011 % of reading	and internal procedure
(Avoirdupois)	(750 to 4 250) lb	0.01 % of reading	utilized in the calibration
			of the weighing system.





Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature – Measure ¹	(-196 to -40) °C	0.039 °C	Fluke 1524
	(-40 to 0) °C	0.033 °C	Digital Thermometer,
	(0 to 230) °C	0.047 °C	Fluke 5615-9
	(230 to 420) °C	0.06 °C	SPRT

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Centrifuge ^{1,3}			
Rate of Rotation	(500 to 2 200) rpm	4 rpm	
	(2 200 to 5 000) rpm	8 rpm	Optical Tachometer
	(5 000 to 12 000) rpm	20 rpm	_
	(12 000 to 24 000) rpm	40 rpm	

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. 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. rpm = revolutions per minute.
- 4. The Legal Entity for this Multisite location, with Field Services, is Transcat, Inc.
- 5. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-2489.22.

Jason Stine, Vice President

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