Certificate ID: F33811

Certificate of Calibration

Quality Calibrations, Inc.
QCI

119 Lawyers Row
Centreville, MD 21617
Phone: 877-747-3883

Device Details

Device ID: 102-444
Serial Number: F33811
Description: Corning Lambda Plus 20
Method: ISO Single Channel
Test Plan: Catalent SC 20
Operator: Judy Nissley

Customer: Sample Customer

Contact: Sample
Location: On Site
Address: Street
City State

Environmental Factors

Air Temperature:	21.20 °C
Barometric Pressure:	30.17 inHg
Relative Humidity:	62 %
Liquid Density:	0.99795
Air Density:	0.00120
Z Factor:	1.00311

Calibration Date: 03-Oct-2023
Calibration Type: Pipette Calibration

Status: Passed
Next Due: 30-Apr-2024
Interval: 6 months

Comment: No Adjustment necessary, 'As found' data serves as 'As left' data.

Measurement Standards

Device ID	Description	Serial Number	Next Calibration
BALANCE	METTLER XS205DU	B130181039	30-Jun-2024
BAROMETER	Digital Barometer	221461521	19-Apr-2024
THERMOMETER	DURAC	J623	30-Jun-2026

As Found

Summary Statistics

20.0 uL	Mean	SD	Unc. +/-	Accuracy % Actual	Accuracy % Target	Precision % Actual	Precision % Target
Ch 1	19.99	0.02	0.26	0.070	1.000	0.121	0.500
10.0 uL	**Mean**	**SD**	**Unc. +/-**	**Actual**	**Target**	**Actual**	**Target**
Ch 1	9.98	0.03	0.26	0.231	2.000	0.262	1.000
2.0 uL	**Mean**	**SD**	**Unc. +/-**	**Actual**	**Target**	**Actual**	**Target**
Ch 1	2.02	0.02	0.27	0.923	10.000	1.186	5.000

Sample Volumes (µL)

Status	1	2	3	4	5
Passed	20.01	19.97	19.95	20.00	19.99
Status	**1**	**2**	**3**	**4**	**5**
Passed	9.98	9.95	10.01	9.99	9.95
Status	**1**	**2**	**3**	**4**	**5**
Passed	2.01	2.05	2.02	1.99	2.04

Statement of Traceability

This certificate has been issued in accordance with QCI SOP QACCRED and ISO 8655-2 Specifications. This statement certifies that this calibration has been performed with instruments and standards traceable to SI units through NIST or equivalent National Metrology Institute. This certificate shall not be reproduced except in full, without written approval of the laboratory. These results relate only to item calibrated and the results apply to sample as received. QCI uses a simple acceptance approach to the TUR. Customer is to determine if the TUR Accuracy ratio (ratio over uncertainty) is acceptable.

ANAB ACCREDITED ISO/IEC 17025 CALIBRATION LABORATORY

Measurement Uncertainties are determined using the factor of k=2 at a 95% confidence level.

ISO 17025:2017 Certified CertificateAC 1347

Completed by: Judy Nissley **Date:** October 3, 2023

Reviewed by: Beverly Heiberger **Date:** October 6, 2023