



## PIPETTE CALIBRATION CERTIFICATE

### 001167871

Customer: BRAZORIA COUNTY AUDITOR  
 ANGLETON, TX 77515-9575  
 Work Order: 00133578  
 Contact: ALEIA WINTERS  
 aleiaw@brazoria-county.com

Serial No.: H44206L  
 Asset ID: H44206L  
 Equipment Type: PIPETTE

Result: **PASS**  
 Cal Date: 03-Jul-23  
 Next Cal Date: 03-Jul-24  
 Performed At: Allometrics Lab  
 Performed By: JTAVERNIER

#### Test Environment Data

Start Test Data:	Air Temperature: 20.5 °C	Water Temperature: 20.00 °C	Humidity: 50.0 %	Barometric Pressure: 1011 mbar
Stop Test Data:	Air Temperature: 20.5 °C	Water Temperature: 20.00 °C	Humidity: 50.0 %	Barometric Pressure: 1011 mbar

#### UUT Conformity Test Data

Detailed Equipment Information	Test Volumes:	As Found Data			As Returned Data		
		1000 µl	5000 µl	10000 µl	1000 µl	5000 µl	10000 µl
Manufacturer: EPPENDORF	Sample 1	1000.1	4994.5	9983.4	1000.1	4994.5	9983.4
Model: REPEATER E3X	Sample 2	999.8	4991.8	9986.4	999.8	4991.8	9986.4
Type: A	Sample 3	999.7	4993.8	9986.6	999.7	4993.8	9986.6
Channel: SINGLE	Sample 4	995.2	4994.3	9986.0	995.2	4994.3	9986.0
Capacity: 10000.0 µl	Sample 5	1002.7	4993.1	9988.0	1002.7	4993.1	9988.0
Resolution: 10 µl	Sample 6	1000.2	4993.0	9988.4	1000.2	4993.0	9988.4
Tolerance: 60 µl	Sample 7	999.9	4992.8	9988.1	999.9	4992.8	9988.1
Tolerance Directive: ISO 8655 TYPES A D1	Sample 8	1000.1	4996.4	9988.3	1000.1	4996.4	9988.3
	Sample 9	1003.0	4994.8	9987.9	1003.0	4994.8	9987.9
	Sample 10	999.7	4992.6	9989.6	999.7	4992.6	9989.6
	Mean Value of 10 readings (mg):	1000.0	4993.7	9987.3	1000.0	4993.7	9987.3
	Standard Deviation [Precision] (mg):	2.0	1.3	1.6	2.0	1.3	1.6
	Water Density Conversion - Z factor (ul/mg):	1.00285	1.00285	1.00285	1.00285	1.00285	1.00285
	Actual Volume (ul):	1002.9	5007.9	10015.7	1002.9	5007.9	10015.7
	Volume Error [Accuracy] (ul):	2.9	7.9	15.7	2.9	7.9	15.7
	Allowable Error (ul):	60	60	60	60	60	60
	Result (Pass/Fail):	Pass	Pass	Pass	Pass	Pass	Pass
	Uncertainty of Measurement, k=2, 95%	4.0 µl	2.5 µl	3.3 µl	4.0 µl	2.5 µl	3.3 µl

Pass\* indicates that the measurement is within the tolerance plus/minus the uncertainty of the measurement and a clear determination of pass/fail cannot be made.

#### TEST EQUIPMENT

Description	ID	Serial Number	Cal. Due Date
LAB ENVIRONMENTAL MONITOR	1251	73167	4/30/2025
WEIGHT SET / 10MG TO 50G	1616	401299390	2/29/2024
DIGITAL THERMOMETER	3013	192608473	3/31/2024
BALANCE / PIPETTE BALANCE	6050	T0102697	8/31/2023
Balance Model	Sensitivity		
AND AD4212B-101	101g x.1mg/31x.01/5.1x.001		

#### PROCEDURE

Procedure Name	Description	Revision Level	Revision Date
5-4WI06	PIPETTE CALIBRATION IAW ISO 8655-6	G	4/16/2021

Inspections and measurements were performed in accordance with ISO 8655-6:2002(E) and ISO 17025. Pass/Fail status determination is derived from allowable tolerances established in ISO 8655 unless other tolerances are specifically requested by the client. The uncertainty associated with these measurements were determined using a coverage factor of k=2 and is not included in the determination of Pass/Fail status. This calibration is traceable to the SI through NIST or other NMI utilizing the equipment shown on the calibration certificate.

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#### COMMENTS

----- end report -----

Approved and Released by: Terry Baldwin, Quality Manager  
 Date of Issue: 07/03/2023

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