

Calibration Certificate

Pipette ID: JJ03213

Certificate Number: 148

VERMONT FORENSIC LABORATORY

45 STATE DR

WATERBURY VT 05671 -

Contact: JOSEPH ABRAHAM

Dept:

Email: JOSEPH.ABRAHAM@VERMONT.GOV

Phone: 802-241-5269

Pipette Information

Calibration Result: **PASS**

Serial # JJ03213
Model:
Mfg: THERMO SCIENTIFIC
Pipette Type: FIXED SINGLE CHANNEL
Temp: 23.1 C Humidity: 70 %
Cal. Interval: 6 MONTHS
Cal Date: 7/26/2016
Department:
Pipette Notes

Asset #: JJ03213
Description:
Nominal 250 μ L
Cal Due Date: 1/31/2017
Room #

Statement of Uncertainty

Measurement uncertainty has been evaluated according to the guidelines of the GUM, using the root-sum-square method and incorporating both Type A, assuming a normal distribution, and Type B components. Measurement uncertainty is expressed with a coverage factor k, denoted above, representing approximately a 95.45 % confidence level.

Traceability

All standards used to perform calibration of the item under test are traceable to the SI through N.I.S.T. and within current calibration cycle by an ISO 17025:2005 Accredited Laboratory. Documentary evidence available upon request.

Calibration Performed By:

BioTek Services, Inc

5310 South Laburnum Ave

Richmond VA 23231

1-800-792-3625

www.biotekservices.com



ISO/IEC 17025:2005 Accredited

A handwritten signature in black ink, appearing to read "S. Halliday", is written over a horizontal line.

STEPHEN HALLIDAY
Calibration Technician

Calibration Certificate

Pipette ID: JJ03213

Certificate Number: 148

Test Points: As Found			Inaccuracy %		Imprecision %		Status	Sample	Weight	Volume	Unc k=3.182
Target	Mean	SD	Actual	Target	Actual	Target					
250	250.88	0.22	0.35	2.00	0.09	2.00	Passed	01	250.57	251.04	1.50
								02	250.37	250.84	
								03	250.58	251.05	
								04	250.12	250.59	

Test Points: As Left			Inaccuracy %		Imprecision %		Status	Sample	Weight	Volume	Unc k=3.182
Target	Mean	SD	Actual	Target	Actual	Target					
250	250.09	0.19	0.04	2.00	0.07	2.00	Passed	01	249.49	249.96	1.50
								02	249.43	249.90	
								03	249.73	250.20	
								04	249.82	250.29	

Calibration Notes:

Standards Used

Company	I.D.	Description	Last Cal.	Cal. Due Date
BIOTEK SERVICES INC	BTS-BAL-012	A&D 4212B-101	2/24/2016	2/28/2017
BIOTEK SERVICES INC	BTS-MASS-023	RICE LAKE	4/23/2016	4/30/2017
BIOTEK SERVICES INC	BTS-TH-009	CONTROL COMPANY 12-078-198	12/14/2015	12/14/2016

Procedures Used In This Event:

Procedure Company	Procedure Name	Description	Rev #	Rev Date
BIOTEK SERVICES INC	BTS-SOP-002	PIPETTE CALIBRATION	9.0	1/1/2014