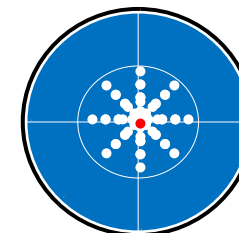


## Calibration Certificate

# PC10709

\* As required by AS ISO/IEC 17025-2005, all measurements in this report are traceable to the International System of Units (Système international d'unités)

Calibration Data - 5 $\mu\text{L}$									
Measurement / Channel	#1	#2	#3	#4	#5	#6	#7	#8	
1	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	1
2	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	2
3	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	3
4	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02	4
5	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5
6	4.89	4.89	4.89	4.89	4.89	4.89	4.89	4.89	6
7	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	7
8	4.92	4.92	4.92	4.92	4.92	4.92	4.92	4.92	8
9	4.92	4.92	4.92	4.92	4.92	4.92	4.92	4.92	9
10	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02	10
Mean Volume ( $\mu\text{L}$ )				4.99		Mean Volume ( $\mu\text{L}$ )			
Inaccuracy ( % )				-0.20		1.13		Imprecision CV ( % )	
Specification ( $\pm$ % )				5.00		2.00		Specification ( $\leq$ % )	
Status				PASS		PASS		Status	
Uncertainty ( $\pm$ $\mu\text{L}$ )				0.13		Uncertainty ( $\pm$ $\mu\text{L}$ )			



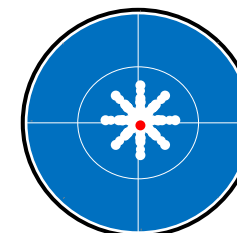
Pipette Data		Laboratory Conditions	
Pipette Manufacturer :	Thermo Scientific	Water Temperature (°C)	21.1
Pipette Type :	Finnpipette F1 ClipTip	Air Pressure (hPa)	998
Volume Range :	5-50 $\mu$ L	Relative Humidity (%)	43
Serial Number :	JH90237	Density Correction ( $\mu$ L/mg)	1.0031
Customer ID:	BAL493	Calibrated with :	Sartorius ME235P auto door
Calibrated on :	5-July-2018	Calibrated by :	Mike Balac BSc (Hons) Chem

## Calibration Certificate

# PC10709

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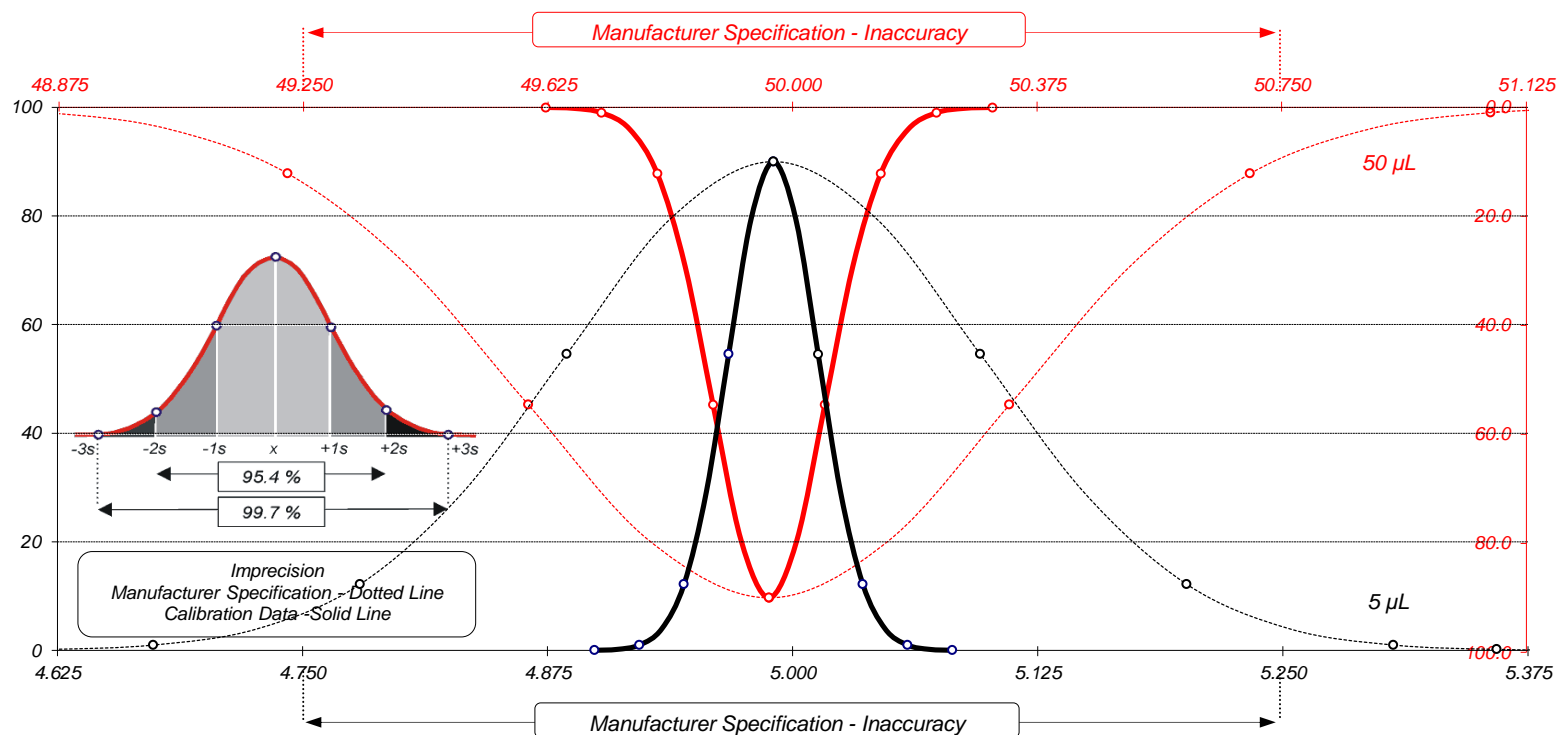
Calibration Data - 50 µL									
Measurement / Channel	#1	#2	#3	#4	#5	#6	#7	#8	
1	49.80	49.80	49.80	49.80	49.80	49.80	49.80	49.80	1
2	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	2
3	49.87	49.87	49.87	49.87	49.87	49.87	49.87	49.87	3
4	49.92	49.92	49.92	49.92	49.92	49.92	49.92	49.92	4
5	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	5
6	49.76	49.76	49.76	49.76	49.76	49.76	49.76	49.76	6
7	49.88	49.88	49.88	49.88	49.88	49.88	49.88	49.88	7
8	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07	8
9	50.04	50.04	50.04	50.04	50.04	50.04	50.04	50.04	9
10	50.15	50.15	50.15	50.15	50.15	50.15	50.15	50.15	10
Mean Volume ( µL )				49.96		Mean Volume ( µL )			
Inaccuracy ( % )				-0.07		0.26		Imprecision CV ( % )	
Specification ( ± % )				1.50		0.70		Specification ( ≤ % )	
Status				PASS		PASS		Status	
Uncertainty ( ± µL )				0.28		Uncertainty ( ± µL )			



Pipette Data		Laboratory Conditions	
Pipette Manufacturer :	Thermo Scientific	Water Temperature (°C)	21.1
Pipette Type :	Finnpipette F1 ClipTip	Air Pressure (hPa)	998
Volume Range :	5-50 µL	Relative Humidity (%)	43
Serial Number :	JH90237	Density Correction (µL/mg)	1.0031
Customer ID:	BAL493	Calibrated with :	Sartorius ME235P auto door
Calibrated on :	5-July-2018	Calibrated by :	Mike Balac BSc (Hons) Chem

## Calibration Certificate

# PC10709



Customer Data		Uncertainty of Measurement	
In Use At:	Pipette Clinic Pty Ltd	Coverage factor at confidence level 95 %	k=2
	48-50 George Street	(Selected volume x)	Linearity ( µL )
	Parramatta NSW 2150	Accuracy ( µL )	y = 0.9994x - 0.0069
		Accuracy + Uncertainty ( µL )	y1 = 1.0027x + 0.1098
Test Method:	AS 2162.2-1998, ISO-8655	Uncertainty ( µL )	Ux = y1 - y