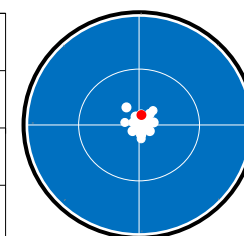
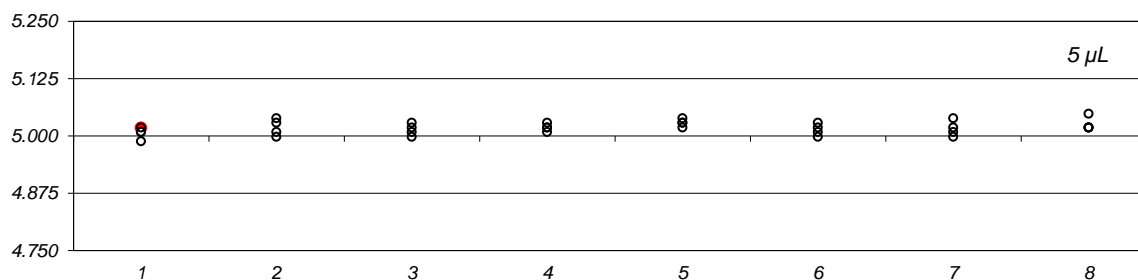


Calibration Certificate

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* 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 μ L									
Measurement / Channel	#1	#2	#3	#4	#5	#6	#7	#8	
1	5.01	5.04	5.01	5.02	5.04	5.02	5.04	5.02	1
2	5.01	5.03	5.02	5.01	5.03	5.03	5.01	5.02	2
3	4.99	5.00	5.03	5.03	5.03	5.00	5.02	5.02	3
4	5.02	5.01	5.00	5.02	5.02	5.01	5.00	5.05	4
Mean Volume (μ L)				5.02		Mean Volume (μ L)			
Inaccuracy (%)				0.34		Imprecision CV (%)			
Specification (\pm %)				5.00		Specification (\leq %)			
Status				PASS		Status			
Uncertainty (\pm μ L)				0.05		Uncertainty (\pm μ 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 μ L	Relative Humidity (%)	43
Serial Number :	JH90237	Density Correction (μ 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

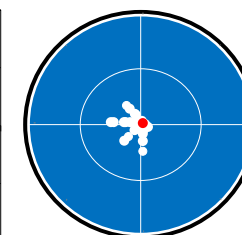
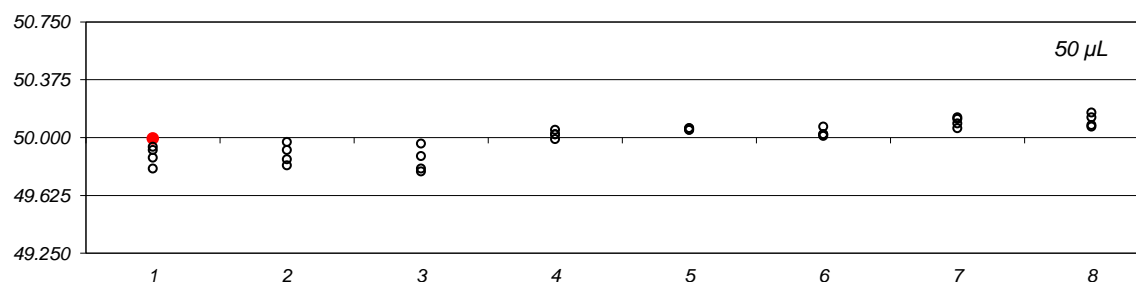
PC10709

* 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 - 50 µL

Measurement / Channel	#1	#2	#3	#4	#5	#6	#7	#8	
1	49.80	49.86	49.88	50.02	50.06	50.01	50.06	50.16	1
2	49.94	49.82	49.78	49.99	50.05	50.02	50.13	50.13	2
3	49.87	49.92	49.80	50.02	50.06	50.02	50.12	50.07	3
4	49.92	49.97	49.96	50.05	50.05	50.07	50.09	50.08	4

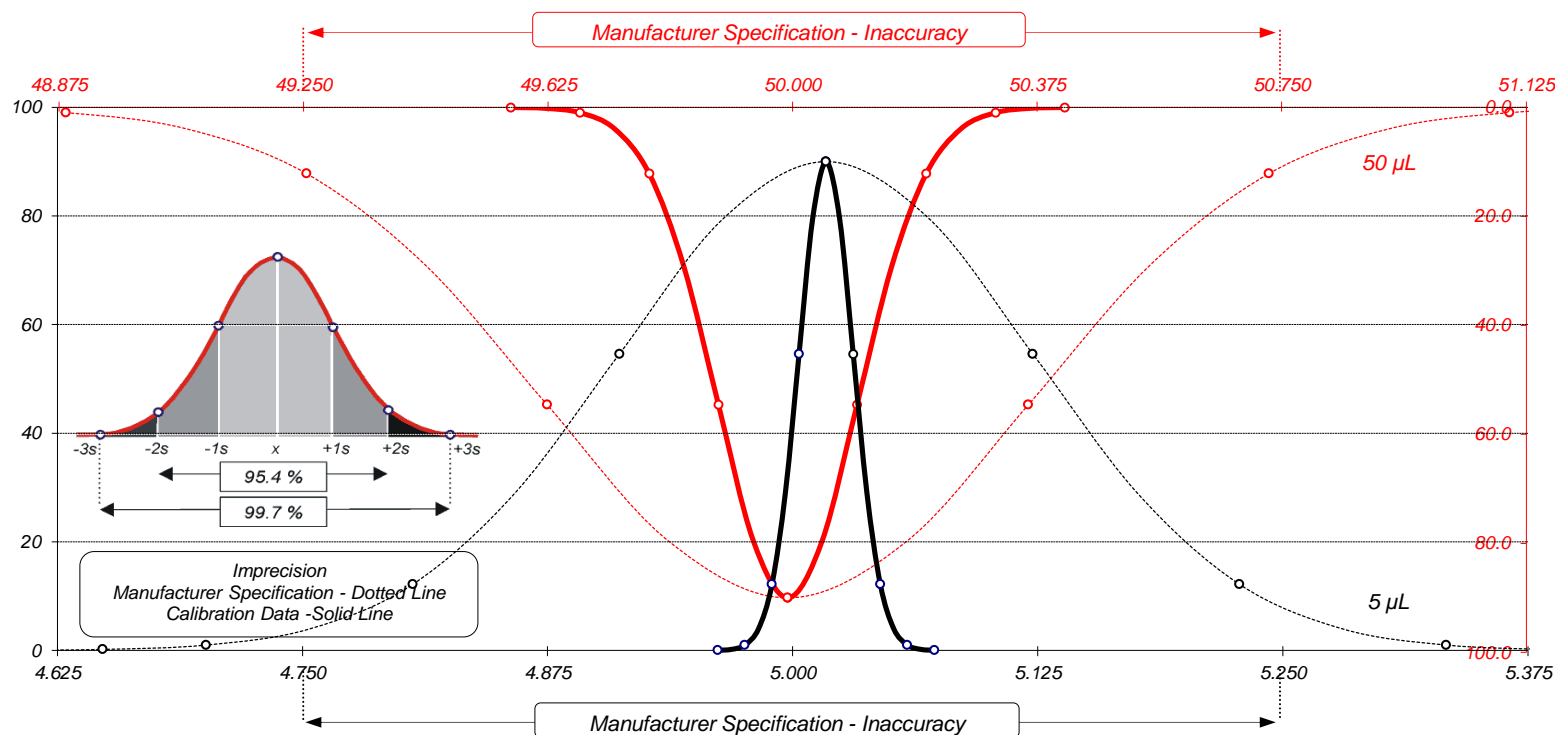
Mean Volume (µL)	49.99		Mean Volume (µL)
Inaccuracy (%)	-0.02	0.21	Imprecision CV (%)
Specification (± %)	1.50	0.70	Specification (≤ %)
Status	PASS	PASS	Status
Uncertainty (± µL)	0.23		Uncertainty (± µL)



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

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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)	$y = 0.9995x + 0.0198$
		Accuracy + Uncertainty (μL)	$y1 = 1.0035x + 0.0476$
Test Method:	AS 2162.2-1998, ISO-8655	Uncertainty (μL)	$Ux = y1 - y$