

eVol® XR Electronic Syringe

Performance Data

Standard Specifications

Syringe	Accuracy			Precision	
	Calibrated Syringe at Full Scale	Calibrated Syringe at 10% Scale	Uncalibrated Syringe at Full Scale	RSD at Full Scale	RSD at 10% Scale
1 mL	± 0.2 %	± 0.5 %	± 0.5 %	± 0.3 %	± 0.6 %
500 µL	± 0.2 %	± 0.5 %	± 0.5 %	± 0.3 %	± 0.6 %
100 µL	± 0.2 %	± 0.5 %	± 0.7 %	± 0.4 %	± 0.7 %
50 µL	± 0.2 %	± 0.5 %	± 1.0 %	± 0.4 %	± 0.8 %
5 µL	± 0.2 %	± 1.0 %	± 1.0 %	± 0.5 %	± 1.0 %

Pharma Company Example – Comparison with a pipette

Pipette 5-100µL eVol with 50µL (25µL volume)	Average dispensed volume (µL)		% RSD (Precision)		% Accuracy	
	Pipette	eVol	Pipette	eVol	Pipette	eVol
Water	24.36	24.98	1.6	0.1	2.6	0.1
Methanol	23.78	25.01	5.9	0.2	4.9	0.04
DCM – not sealed	22.20	22.33	4.1	1.2	11.2	10.7
DCM – sealed	25.00			0.2		0.0

SGE in-house calibration

	50µL “AS FOUND” Calibration		50.00µL “AS CALIBRATED” Calibration		50µL syringe to dispense 5µL volume Calibration result	
	1	50.31	1	50.12	1	4.976
	2	50.47	2	50.11	2	4.992
	3	50.49	3	50.07	3	4.975
	4	50.47	4	50.01	4	4.977
	5	50.40	5	50.06	5	4.984
	6	50.38	6	49.94	6	4.986
	7	50.37	7	50.09	7	4.980
	8	50.28	8	50.09	8	4.988
	9	50.33	9	50.09	9	4.984
	10	50.29	10	50.04	10	4.984
		Pass		Pass		Pass
Average		50.379		50.062		4.9826
RSD		0.154%		0.108%		0.111%
RSD spec		0.4%		0.4%		0.7%
Innaccuracy		0.758%		0.124%		-0.348%
Innaccuracy spec		±1.0%		±0.2%		±0.5%

