



GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
RANDOM ERROR = REPEATABILITY

PIPETMAN® M CONNECTED SINGLE CHANNEL														
Model	PIPETMAN® DIAMOND Tips		Part Number	Gilson Specifications						ISO 8655-2				
				Standard PIPET Mode						REPETITIVE Mode				
				Volume Range	Volume (µL)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*	Volume Range	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*
P10M	D10 DL10	DF10ST DFL10ST	F81040	0.5-10 µL	0.5 1 5 10	± 0.040 ± 0.025 ± 0.060 ± 0.080	≤ 0.013 ≤ 0.012 ≤ 0.020 ≤ 0.025	± 8.0 ± 2.5 ± 1.2 ± 0.8	≤ 2.6 ≤ 1.2 ≤ 0.4 ≤ 0.3	0.5-10 µL	± 0.12 ± 0.12 ± 0.12 ± 0.12	≤ 0.08 ≤ 0.08 ≤ 0.08 ≤ 0.08	± 24.00 ± 12.0 ± 2.4 ± 1.2	≤ 16.0 ≤ 8.0 ≤ 1.6 ≤ 0.8
P20M	D200	DF30ST	F81041	2-20 µL	2 10 20	± 0.075 ± 0.100 ± 0.150	≤ 0.025 ≤ 0.035 ≤ 0.050	± 3.8 ± 1.0 ± 0.8	≤ 1.3 ≤ 0.4 ≤ 0.3	2-20 µL	± 0.2 ± 0.2 ± 0.2	≤ 0.1 ≤ 0.1 ≤ 0.1	± 10.0 ± 2.0 ± 1.0	≤ 5.0 ≤ 1.0 ≤ 0.5
P100M	D200	DF100ST	F81042	5-100 µL	5 10 50 100	± 0.35 ± 0.30 ± 0.38 ± 0.40	≤ 0.10 ≤ 0.10 ≤ 0.12 ≤ 0.15	± 7.0 ± 3.0 ± 0.8 ± 0.4	≤ 2.0 ≤ 1.0 ≤ 0.2 ≤ 0.2	5-100 µL	± 0.8 ± 0.8 ± 0.8 ± 0.8	≤ 0.3 ≤ 0.3 ≤ 0.3 ≤ 0.3	± 16.0 ± 8.0 ± 1.6 ± 0.3	≤ 6.0 ≤ 3.0 0.6 0.3
P200M	D200 D300	DF200ST DF300ST	F81043	20-200 µL	20 100 200	± 0.40 ± 0.80 ± 1.00	≤ 0.15 ≤ 0.22 ≤ 0.26	± 2.0 ± 0.8 ± 0.5	≤ 0.8 ≤ 0.2 ≤ 0.1	5-200 µL	± 1.6 ± 1.6 ± 1.6	≤ 0.6 ≤ 0.6 ≤ 0.6	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P300M	D200 D300	DF200ST DF300ST	F81044	20-300 µL	20 30 150 300	± 0.80 ± 0.70 ± 0.90 ± 1.05	≤ 0.16 ≤ 0.20 ≤ 0.23 ≤ 0.30	± 4.0 ± 2.3 ± 0.6 ± 0.4	≤ 0.8 ≤ 0.7 ≤ 0.2 ≤ 0.1	10-300 µL	± 4.0 ± 4.0 ± 4.0 ± 4.0	≤ 1.5 ≤ 1.5 ≤ 1.5 ≤ 1.5	± 20.0 ± 13.33 ± 2.67 ± 1.33	≤ 7.5 ≤ 5.0 ≤ 1.0 ≤ 0.5
P1200M	D1000 D1200	DF1000ST DF1200ST	F81045	100-1200 µL	100 120 600 1200	± 2.5 ± 2.4 ± 3.6 ± 6.0	≤ 0.4 ≤ 0.4 ≤ 0.8 ≤ 1.2	± 2.5 ± 2.0 ± 0.6 ± 0.5	≤ 0.4 ≤ 0.3 ≤ 0.1 ≤ 0.1	20-1200 µL	± 16 ± 16 ± 16 ± 16	≤ 6.0 ≤ 6.0 ≤ 6.0 ≤ 6.0	± 16.0 ± 13.33 ± 2.67 ± 1.33	≤ 0.6 ≤ 0.5 ≤ 0.1 ≤ 0.1
P5000M	D5000		F81046	500-5000 µL	500 2500 5000	± 10 ± 15 ± 25	≤ 2 ≤ 4 ≤ 7	± 2.0 ± 0.6 ± 0.5	≤ 0.4 ≤ 0.2 ≤ 0.1	100-5000 µL	± 40 ± 40 ± 40	≤ 15.0 ≤ 15.0 ≤ 15.0	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P10mLM	D10mL		F81047	1-10 mL	1 mL 5 mL 10 mL	± 25 ± 30 ± 50	≤ 4 ≤ 8 ≤ 12	± 2.5 ± 0.6 ± 0.5	0.4 0.2 0.1	200 µL-10 mL	± 60 ± 60 ± 60	≤ 30.0 ≤ 30.0 ≤ 30.0	± 6.0 ± 1.2 ± 0.6	≤ 3.0 ≤ 0.6 ≤ 0.3
PIPETMAN® M CONNECTED MULTICHANNEL														
P8x10M	D10 DL10	DF10ST DFL10ST	F81048	0.5-10 µL	0.5 1 5 10	± 0.05 ± 0.04 ± 0.08 ± 0.10	≤ 0.02 ≤ 0.02 ≤ 0.04 ≤ 0.06	± 10.0 ± 4.0 ± 1.6 ± 1.0	≤ 4.0 ≤ 2.0 ≤ 0.8 ≤ 0.6	0.5-10 µL	± 0.24 ± 0.24 ± 0.24 ± 0.24	≤ 0.16 ≤ 0.16 ≤ 0.16 ≤ 0.16	± 48.0 ± 24.0 ± 4.8 ± 2.4	≤ 32.0 ≤ 16.0 ≤ 3.2 ≤ 1.6
P12x10M			F81049											
P8x20M	DL10 D200	DFL10ST DF30ST	F81050	1-20 µL	1 2 10 20	± 0.08 ± 0.09 ± 0.15 ± 0.25	≤ 0.05 ≤ 0.06 ≤ 0.10 ≤ 0.12	± 8.0 ± 4.5 ± 1.5 ± 1.3	≤ 5.0 ≤ 3.0 ≤ 1.0 ≤ 0.6	1-20 µL	± 0.4 ± 0.4 ± 0.4 ± 0.4	≤ 0.2 ≤ 0.2 ≤ 0.2 ≤ 0.2	± 40.0 ± 20.0 ± 4.0 ± 2.0	≤ 20.0 ≤ 10.0 ≤ 2.0 ≤ 1.0
P12x20M			F81051											
P8x100M	D200	DF100ST	F81052	10-100 µL	10 50 100	± 0.25 ± 0.50 ± 0.80	≤ 0.14 ≤ 0.20 ≤ 0.25	± 2.5 ± 1.0 ± 0.8	≤ 1.4 ≤ 0.4 ≤ 0.3	5-100 µL	± 1.6 ± 1.6 ± 1.6	≤ 0.6 ≤ 0.6 ≤ 0.6	± 16.0 ± 3.2 ± 1.6	≤ 6.0 ≤ 1.2 ≤ 0.6
P12x100M			F81053											
P8x200M	D200 D300	DF100ST DF200ST DF300ST	F81054	20-200 µL	20 100 200	± 0.50 ± 1.00 ± 2.00	≤ 0.16 ≤ 0.30 ≤ 0.50	± 2.5 ± 1.0 ± 1.0	≤ 0.8 ≤ 0.3 ≤ 0.3	5-200 µL	± 3.2 ± 3.2 ± 3.2	≤ 1.2 ≤ 1.2 ≤ 1.2	± 16.0 ± 3.2 ± 1.6	≤ 6.0 ≤ 1.2 ≤ 0.6
P12x200M			F81055											
P8x300M	D200 D300	DF200ST DF300ST	F81056	10-300 µL	10 30 150 300	± 1.00 ± 1.00 ± 1.50 ± 2.40	≤ 0.18 ≤ 0.18 ≤ 0.375 ≤ 0.45	± 10.0 ± 3.3 ± 1.0 ± 0.8	≤ 1.8 ≤ 0.6 ≤ 0.3 ≤ 0.2	10-300 µL	± 8.0 ± 8.0 ± 8.0 ± 8.0	≤ 3.0 ≤ 3.0 ≤ 3.0 ≤ 3.0	± 80.0 ± 26.7 ± 5.3 ± 2.7	≤ 30.0 ≤ 10.0 ≤ 2.0 ≤ 1.0
P12x300M			F81057											
P8x1200M	D1200	DF1200ST	F81058	50-1200 µL	50 120 600 1200	± 4.0 ± 4.0 ± 6.0 ± 9.6	≤ 0.7 ≤ 0.7 ≤ 1.5 ≤ 1.8	± 8.0 ± 3.3 ± 1.0 ± 0.8	≤ 1.4 ≤ 0.6 ≤ 0.3 ≤ 0.2	50-1200 µL	± 32 ± 32 ± 32 ± 32	≤ 12 ≤ 12 ≤ 12 ≤ 12	± 64.0 ± 26.7 ± 5.3 ± 2.7	≤ 24.0 ≤ 10.0 ≤ 2.0 ≤ 1.0
P12x1200M			F81059											

*CV means Coefficient of Variation

Gilson maximum permissible errors are guaranteed only when PIPETMAN® pipettes are used with the recommended PIPETMAN® DIAMOND Tips.

Under these conditions, Gilson volumetric specifications in standard pipetting (PIPET Mode) are guaranteed with a performance exceeding ISO 8655-2 recommendations for this Mode. In the absence of ISO recommendations for repetitive pipetting Mode for air displacement pipettes, Gilson volumetric specifications for repetitive pipetting (REPETITIVE Mode) are guaranteed within ISO 8655-2 recommendations for standard pipetting (Cf. ISO 8655-2 table 1).



GILSON PIPETTE SPECIFICATIONS

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MYPIPETMAN® SINGLE CHANNEL MODELS



Model	PIPETMAN® DIAMOND Tips		Vol. (µL)	Maximum Permissible Errors							
				Gilson				ISO 8655			
				Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV*)
MyPIPETMAN P2	D10 DL10	DF10ST DFL10ST	0.2	± 0.024	≤ 0.012	± 12.0	≤ 6.0	± 0.08	≤ 0.04	± 40.0	≤ 20.0
			0.5	± 0.025	≤ 0.012	± 5.0	≤ 2.4	± 0.08	≤ 0.04	± 16.0	≤ 8.0
			1	± 0.027	≤ 0.013	± 2.7	≤ 1.3	± 0.08	≤ 0.04	± 8.0	≤ 4.0
MyPIPETMAN P10	D10 DL10	DF10ST DFL10ST	1	± 0.025	≤ 0.012	± 2.5	≤ 1.2	± 0.12	≤ 0.08	± 12.0	≤ 8.0
			5	± 0.075	≤ 0.030	± 1.5	≤ 0.6	± 0.12	≤ 0.08	± 2.4	≤ 1.6
			10	± 0.100	≤ 0.040	± 1.0	≤ 0.4	± 0.12	≤ 0.08	± 1.2	≤ 0.8
MyPIPETMAN P20	D200	DF30ST	2	± 0.10	≤ 0.030	± 5.0	≤ 1.5	± 0.2	≤ 0.1	± 10.0	≤ 5.0
			10	± 0.10	≤ 0.050	± 1.0	≤ 0.5	± 0.2	≤ 0.1	± 2.0	≤ 1.0
			20	± 0.20	≤ 0.060	± 1.0	≤ 0.3	± 0.2	≤ 0.1	± 1.0	≤ 0.5
MyPIPETMAN P100	D200	DF100ST	10	± 0.35	≤ 0.10	± 3.5	≤ 1.0	± 0.8	≤ 0.3	± 8.0	≤ 3.0
			50	± 0.40	≤ 0.12	± 0.8	≤ 0.24	± 0.8	≤ 0.3	± 1.6	≤ 0.6
			100	± 0.80	≤ 0.15	± 0.8	≤ 0.15	± 0.8	≤ 0.3	± 0.8	≤ 0.3
MyPIPETMAN P200	D200 D300	DF200ST DF300ST	20	± 0.50	≤ 0.20	± 2.5	≤ 1.0	± 1.6	≤ 0.6	± 8.0	≤ 3.0
			100	± 0.80	≤ 0.25	± 0.8	≤ 0.25	± 1.6	≤ 0.6	± 1.6	≤ 0.6
			200	± 1.60	≤ 0.30	± 0.8	≤ 0.15	± 1.6	≤ 0.6	± 0.8	≤ 0.3
MyPIPETMAN P1000	D1000 D1200	DF1000ST DF1200ST	100	± 3.0	≤ 0.6	± 3.0	≤ 0.6	± 8.0	≤ 3.0	± 8.0	≤ 3.0
			500	± 4.0	≤ 1.0	± 0.8	≤ 0.2	± 8.0	≤ 3.0	± 1.6	≤ 0.6
			1000	± 8.0	≤ 1.5	± 0.8	≤ 0.15	± 8.0	≤ 3.0	± 0.8	≤ 0.3
MyPIPETMAN P5000	D5000		500	± 12	≤ 3	± 2.4	≤ 0.6	± 40	≤ 15.0	± 8.0	≤ 3.0
			2500	± 15	≤ 5	± 0.6	≤ 0.2	± 40	≤ 15.0	± 1.6	≤ 0.6
			5000	± 30	≤ 8	± 0.6	≤ 0.16	± 40	≤ 15.0	± 0.8	≤ 0.3
MyPIPETMAN P10mL	D10mL		1000	± 30	≤ 6	± 3.0	≤ 0.6	± 60	≤ 30.0	± 6.0	≤ 3.0
			5000	± 40	≤ 10	± 0.8	≤ 0.2	± 60	≤ 30.0	± 1.2	≤ 0.6
			10000	± 60	≤ 16	± 0.6	≤ 0.16	± 60	≤ 30.0	± 0.6	≤ 0.3

MYPIPETMAN® MULTICHANNEL MODELS



Model	PIPETMAN® DIAMOND Tips		Vol. (µL)	Maximum Permissible Errors							
				Gilson				ISO 8655			
				Systematic error (µL)	Random error (µL)	Systematic error (%)	Random error (%CV*)	Systematic error (µL)	Random error (µL)	Systematic error (%)	Random error (%CV*)
MyPIPETMAN P8x10	D10 DL10	DF10ST DFL10ST	0.5	± 0.08	≤ 0.04	± 16.0	≤ 8.0	± 0.24	≤ 0.16	± 48.0	≤ 32.0
			1	± 0.08	≤ 0.05	± 8.0	≤ 5.0	± 0.24	≤ 0.16	± 24.0	≤ 16.0
MyPIPETMAN P12x10	DL10	DFL10ST	5	± 0.20	≤ 0.10	± 4.0	≤ 2.0	± 0.24	≤ 0.16	± 4.8	≤ 3.2
			10	± 0.20	≤ 0.10	± 2.0	≤ 1.0	± 0.24	≤ 0.16	± 2.4	≤ 1.6
MyPIPETMAN P8x20	DL10 D200	DFL10ST DF30ST	2	± 0.10	≤ 0.08	± 5.0	≤ 4.0	± 0.4	≤ 0.2	± 20.0	≤ 10.0
			10	± 0.20	≤ 0.10	± 2.0	≤ 1.0	± 0.4	≤ 0.2	± 4.0	≤ 2.0
MyPIPETMAN P12x20	D200	DF30ST	20	± 0.40	≤ 0.15	± 2.0	≤ 0.75	± 0.4	≤ 0.2	± 2.0	≤ 1.0
MyPIPETMAN P8x200	D200	DF200ST	20	± 0.50	≤ 0.25	± 2.5	≤ 1.25	± 3.2	≤ 1.2	± 16.0	≤ 6.0
			100	± 1.00	≤ 0.40	± 1.0	≤ 0.4	± 3.2	≤ 1.2	± 3.2	≤ 1.2
MyPIPETMAN P12x200	D300	DF300ST	200	± 2.00	≤ 0.50	± 1.0	≤ 0.25	± 3.2	≤ 1.2	± 1.6	≤ 0.6
MyPIPETMAN P8x300	D200	DF200ST	20	± 1.00	≤ 0.35	± 5.0	≤ 1.75	± 8.0	≤ 3.0	± 40.0	≤ 15.0
			30	± 1.00	≤ 0.35	± 3.3	≤ 1.17	± 8.0	≤ 3.0	± 26.67	≤ 10.0
MyPIPETMAN P12x300	D300	DF300ST	150	± 1.50	≤ 0.60	± 1.0	≤ 0.4	± 8.0	≤ 3.0	± 5.33	≤ 2.0
			300	± 3.00	≤ 1.00	± 1.0	≤ 0.33	± 8.0	≤ 3.0	± 2.67	≤ 1.0

*CV means Coefficient of Variation | Gilson maximum permissible errors are guaranteed only when PIPETMAN® pipettes are used with the recommended PIPETMAN® DIAMOND Tips.

NOTE

The data given in this table conform to the ISO 8655-2 standard. With a precise pipetting technique, the P2 model can be used to aspirate volumes as low as 0.1 µL and the P10 model as low as 0.5 µL.



GILSON PIPETTE SPECIFICATIONS

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PIPETMAN® L SINGLE CHANNEL—VARIABLE VOLUME MODELS													
Model	PIPETMAN® DIAMOND Tips		Part Number		Volume (µL)	Maximum Permissible Errors							
			With Stainless Steel Ejector	With Plastic Ejector		Gilson				ISO 8655			
						Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*
P2L	D10 DL10	DF10ST DFL10ST	FA10001M	FA10001P	0.2	± 0.024	≤ 0.012	± 12.0	≤ 6.0	± 0.08	≤ 0.04	± 40.0	≤ 20.0
					0.5	± 0.025	≤ 0.012	± 5.0	≤ 2.4	± 0.08	≤ 0.04	± 16.0	≤ 8.0
					1	± 0.027	≤ 0.013	± 2.7	≤ 1.3	± 0.08	≤ 0.04	± 8.0	≤ 4.0
					2	± 0.030	≤ 0.014	± 1.5	≤ 0.7	± 0.08	≤ 0.04	± 4.0	≤ 2.0
P10L	D10 DL10	DF10ST DFL10ST	FA10002M	FA10002P	0.5	± 0.040	≤ 0.016	± 8.0	≤ 3.2	± 0.12	≤ 0.08	± 24.0	≤ 16.0
					1	± 0.025	≤ 0.012	± 2.5	≤ 1.2	± 0.12	≤ 0.08	± 12.0	≤ 8.0
					5	± 0.075	≤ 0.030	± 1.5	≤ 0.6	± 0.12	≤ 0.08	± 2.4	≤ 1.6
					10	± 0.100	≤ 0.040	± 1.0	≤ 0.4	± 0.12	≤ 0.08	± 1.2	≤ 0.8
P20L	D200	DF30ST	FA10003M	FA10003P	2	± 0.10	≤ 0.030	± 5.0	≤ 1.5	± 0.2	≤ 0.1	± 10.0	≤ 5.0
					10	± 0.10	≤ 0.050	± 1.0	≤ 0.5	± 0.2	≤ 0.1	± 2.0	≤ 1.0
					20	± 0.20	≤ 0.060	± 1.0	≤ 0.3	± 0.2	≤ 0.1	± 1.0	≤ 0.5
P100L	D200	DF100ST	FA10004M	FA10004P	10	± 0.35	≤ 0.10	± 3.5	≤ 1.0	± 0.8	≤ 0.3	± 8.0	≤ 3.0
					50	± 0.40	≤ 0.12	± 0.8	≤ 0.24	± 0.8	≤ 0.3	± 1.6	≤ 0.6
					100	± 0.80	≤ 0.15	± 0.8	≤ 0.15	± 0.8	≤ 0.3	± 0.8	≤ 0.3
P200L	D200 D300	DF200ST DF300ST	FA10005M	FA10005P	20	± 0.50	≤ 0.20	± 2.5	≤ 1.0	± 1.6	≤ 0.6	± 8.0	≤ 3.0
					100	± 0.80	≤ 0.25	± 0.8	≤ 0.25	± 1.6	≤ 0.6	± 1.6	≤ 0.6
					200	± 1.60	≤ 0.30	± 0.8	≤ 0.15	± 1.6	≤ 0.6	± 0.8	≤ 0.3
P1000L	D1000 D1200	DF1000ST DF1200ST	FA10006M	FA10006P	100	± 3.0	≤ 0.6	± 3.0	≤ 0.6	± 8.0	≤ 3.0	± 8.0	≤ 3.0
					500	± 4.0	≤ 1.0	± 0.8	≤ 0.2	± 8.0	≤ 3.0	± 1.6	≤ 0.6
					1000	± 8.0	≤ 1.5	± 0.8	≤ 0.15	± 8.0	≤ 3.0	± 0.8	≤ 0.3
P5000L	D5000		FA10007		500	± 12	≤ 3	± 2.4	≤ 0.6	± 40	≤ 15.0	± 8.0	≤ 3.0
					2500	± 15	≤ 5	± 0.6	≤ 0.2	± 40	≤ 15.0	± 1.6	≤ 0.6
					5000	± 30	≤ 8	± 0.6	≤ 0.16	± 40	≤ 15.0	± 0.8	≤ 0.3
P10mLL	D10mL		FA10008		1000	± 30	≤ 6	± 3.0	≤ 0.6	± 60	≤ 30.0	± 6.0	≤ 3.0
					5000	± 40	≤ 10	± 0.8	≤ 0.2	± 60	≤ 30.0	± 1.2	≤ 0.6
					10000	± 60	≤ 16	± 0.6	≤ 0.16	± 60	≤ 30.0	± 0.6	≤ 0.3
PIPETMAN® L MULTICHANNEL MODELS													
P8x10L	D10 DL10	DF10ST DFL10ST	FA10013		0.5	± 0.08	≤ 0.04	± 16.0	≤ 8.0	± 0.24	≤ 0.16	± 48.0	≤ 32.0
					1	± 0.08	≤ 0.05	± 8.0	≤ 5.0	± 0.24	≤ 0.16	± 24.0	≤ 16.0
					5	± 0.20	≤ 0.10	± 4.0	≤ 2.0	± 0.24	≤ 0.16	± 4.8	≤ 3.2
					10	± 0.20	≤ 0.10	± 2.0	≤ 1.0	± 0.24	≤ 0.16	± 2.4	≤ 1.6
P12x10L	DL10	DFL10ST	FA10014		5	± 0.20	≤ 0.10	± 4.0	≤ 2.0	± 0.24	≤ 0.16	± 4.8	≤ 3.2
					10	± 0.20	≤ 0.10	± 2.0	≤ 1.0	± 0.24	≤ 0.16	± 2.4	≤ 1.6
P8x20L	DL10 D200	DFL10ST DF30ST	FA10009		2	± 0.10	≤ 0.08	± 5.0	≤ 4.0	± 0.4	≤ 0.2	± 20.0	≤ 10.0
					10	± 0.20	≤ 0.10	± 2.0	≤ 1.0	± 0.4	≤ 0.2	± 4.0	≤ 2.0
					20	± 0.40	≤ 0.15	± 2.0	≤ 0.75	± 0.4	≤ 0.2	± 2.0	≤ 1.0
P12x20L	D200	DF30ST	FA10010		10	± 0.20	≤ 0.10	± 2.0	≤ 1.0	± 0.4	≤ 0.2	± 4.0	≤ 2.0
					20	± 0.40	≤ 0.15	± 2.0	≤ 0.75	± 0.4	≤ 0.2	± 2.0	≤ 1.0
P8x200L	D200 D300	DF200ST DF300ST	FA10011		20	± 0.50	≤ 0.25	± 2.5	≤ 1.25	± 3.2	≤ 1.2	± 16.0	≤ 6.0
					100	± 1.00	≤ 0.40	± 1.0	≤ 0.4	± 3.2	≤ 1.2	± 3.2	≤ 1.2
					200	± 2.00	≤ 0.50	± 1.0	≤ 0.25	± 3.2	≤ 1.2	± 1.6	≤ 0.6
P12x200L	D300	DF300ST	FA10012		100	± 1.00	≤ 0.40	± 1.0	≤ 0.4	± 3.2	≤ 1.2	± 3.2	≤ 1.2
					200	± 2.00	≤ 0.50	± 1.0	≤ 0.25	± 3.2	≤ 1.2	± 1.6	≤ 0.6
P8x200LVR	D200 D300	DF200ST DF300ST	FA10035		20	± 0.50	≤ 0.25	± 2.5	≤ 1.25	± 3.2	≤ 1.2	± 16.0	≤ 6.0
					100	± 1.00	≤ 0.40	± 1.0	≤ 0.4	± 3.2	≤ 1.2	± 3.2	≤ 1.2
					200	± 2.00	≤ 0.50	± 1.0	≤ 0.25	± 3.2	≤ 1.2	± 1.6	≤ 0.6
P12x200LVR	D300	DF300ST	FA10036		100	± 1.00	≤ 0.40	± 1.0	≤ 0.4	± 3.2	≤ 1.2	± 3.2	≤ 1.2
					200	± 2.00	≤ 0.50	± 1.0	≤ 0.25	± 3.2	≤ 1.2	± 1.6	≤ 0.6
P8x300L	D200 D300	DF200ST DF300ST	FA10015		20	± 1.00	≤ 0.35	± 5.0	≤ 1.75	± 8.0	≤ 3.0	± 40.0	≤ 15.0
					30	± 1.00	≤ 0.35	± 3.3	≤ 1.17	± 8.0	≤ 3.0	± 26.67	≤ 10.0
					150	± 1.50	≤ 0.60	± 1.0	≤ 0.4	± 8.0	≤ 3.0	± 5.33	≤ 2.0
					300	± 3.00	≤ 1.00	± 1.0	≤ 0.33	± 8.0	≤ 3.0	± 2.67	≤ 1.0
P12x300L	D300	DF300ST	FA10016		150	± 1.50	≤ 0.60	± 1.0	≤ 0.4	± 8.0	≤ 3.0	± 5.33	≤ 2.0
					300	± 3.00	≤ 1.00	± 1.0	≤ 0.33	± 8.0	≤ 3.0	± 2.67	≤ 1.0
P8x300LVR	D200 D300	DF200ST DF300ST	FA10037		20	± 1.00	≤ 0.35	± 5.0	≤ 1.75	± 8.0	≤ 3.0	± 40.0	≤ 15.0
					30	± 1.00	≤ 0.35	± 3.3	≤ 1.17	± 8.0	≤ 3.0	± 26.67	≤ 10.0
					150	± 1.50	≤ 0.60	± 1.0	≤ 0.4	± 8.0	≤ 3.0	± 5.33	≤ 2.0
					300	± 3.00	≤ 1.00	± 1.0	≤ 0.33	± 8.0	≤ 3.0	± 2.67	≤ 1.0
P12x300LVR	D300	DF300ST	FA10038		150	± 1.50	≤ 0.60	± 1.0	≤ 0.4	± 8.0	≤ 3.0	± 5.33	≤ 2.0
					300	± 3.00	≤ 1.00	± 1.0	≤ 0.33	± 8.0	≤ 3.0	± 2.67	≤ 1.0
P8x1200L	D1200	DF1200ST	FA10039		100	± 6.0	≤ 0.9	± 6.0	≤ 0.9	± 32	≤ 12.0	± 32.00	≤ 12.0
					120	± 6.0	≤ 0.9	± 5.0	≤ 0.75	± 32	≤ 12.0	± 26.67	≤ 10.0
					600	± 8.0	≤ 1.2	± 1.33	≤ 0.2	± 32	≤ 12.0	± 5.33	≤ 2.0
					1200	± 10.0	≤ 1.5	± 0.83	≤ 0.13	± 32	≤ 12.0	± 2.67	≤ 1.0
P12x1200L	D1200	DF1200ST	FA10040		100	± 6.0	≤ 0.9	± 6.0	≤ 0.9	± 32	≤ 12.0	± 32.00	≤ 12.0
					120	± 6.0	≤ 0.9	± 5.0	≤ 0.75	± 32	≤ 12.0	± 26.67	≤ 10.0
					600	± 8.0	≤ 1.2	± 1.33	≤ 0.2	± 32	≤ 12.0	± 5.33	≤ 2.0
					1200	± 10.0	≤ 1.5	± 0.83	≤ 0.13	± 32	≤ 12.0	± 2.67	≤ 1.0

*CV means Coefficient of Variation

Gilson maximum permissible errors are guaranteed only when PIPETMAN® pipettes are used with the recommended PIPETMAN® DIAMOND Tips.

For a pipette with a plastic tip ejector, the part number ends with the letter P.

For a pipette with a stainless steel tip ejector, the part number ends with the letter M.

P5000L and P10mLL are equipped with plastic tip ejectors.



GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
RANDOM ERROR = REPEATABILITY

PIPETMAN® L FIXED VOLUME MODELS

Model	PIPETMAN® DIAMOND Tips		Part Number	Volume (µL)	Gilson				ISO 8655			
					Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*
F1L	D10 DL10	DF10ST DFL10ST	FA10017	1	± 0.02	≤ 0.015	± 2.0	≤ 1.50	± 0.05	≤ 0.05	± 5.0	≤ 5.0
F2L	D10 DL10	DF10ST DFL10ST	FA10018	2	± 0.05	≤ 0.02	± 2.5	≤ 1.0	± 0.08	≤ 0.04	± 4.0	≤ 2.0
F5L	D10 DL10	DF10ST DFL10ST	FA10019	5	± 0.050	≤ 0.025	± 1.0	≤ 0.5	± 0.125	≤ 0.075	± 2.5	≤ 1.5
F10L	D10 DL10	DF10ST DFL10ST	FA10020	10	± 0.06	≤ 0.03	± 0.6	≤ 0.3	± 0.12	≤ 0.08	± 1.2	≤ 0.8
F20L	D200	DF30ST	FA10021	20	± 0.10	≤ 0.05	± 0.5	≤ 0.25	± 0.20	≤ 0.10	± 1.0	≤ 0.5
F25L	D200	DF30ST	FA10022	25	± 0.20	≤ 0.07	± 0.8	≤ 0.28	± 0.50	≤ 0.20	± 2.0	≤ 0.8
F50L	D200	DF100ST	FA10023	50	± 0.35	≤ 0.12	± 0.7	≤ 0.24	± 0.50	≤ 0.20	± 1.0	≤ 0.4
F100L	D200	DF100ST	FA10024	100	± 0.55	≤ 0.15	± 0.55	≤ 0.15	± 0.80	≤ 0.30	± 0.8	≤ 0.3
F200L	D200	DF200ST	FA10025	200	± 1.2	≤ 0.30	± 0.6	≤ 0.15	± 1.60	≤ 0.60	± 0.8	≤ 0.3
F250L	D300	DF300ST	FA10026	250	± 1.50	≤ 0.75	± 0.6	≤ 0.3	± 4.00	≤ 1.50	± 1.6	≤ 0.6
F300L	D1000	DF1000ST	FA10027	300	± 2.4	≤ 0.50	± 0.8	≤ 0.17	± 4.00	≤ 1.50	± 1.33	≤ 0.5
F400L	D1000	DF1000ST	FA10028	400	± 2.4	≤ 0.80	± 0.6	≤ 0.2	± 4.00	≤ 1.50	± 1.0	≤ 0.4
F500L	D1000	DF1000ST	FA10029	500	± 3.0	≤ 0.80	± 0.6	≤ 0.16	± 4.00	≤ 1.50	± 0.8	≤ 0.3
F1000L	D1000	DF1000ST	FA10030	1000	± 5.0	≤ 1.3	± 0.5	≤ 0.13	± 8.00	≤ 3.00	± 0.8	≤ 0.3
F5000L	D5000		FA10031	5000	± 20.0	≤ 7.0	± 0.4	≤ 0.14	± 40.00	≤ 15.00	± 0.8	≤ 0.3

*CV means Coefficient of Variation



GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
RANDOM ERROR = REPEATABILITY

PIPETMAN® SINGLE CHANNEL

Model	PIPETMAN® DIAMOND Tips		Part Number	Volume (µL)	Maximum Permissible Errors							
					Gilson				ISO 8655			
					Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*
P2	D10 DL10	DF10ST DFL10ST	F144054M	0.2	± 0.024	≤ 0.012	± 12.0	≤ 6.0	± 0.08	≤ 0.04	± 40.0	≤ 20.0
				0.5	± 0.025	≤ 0.012	± 5.0	≤ 2.4	± 0.08	≤ 0.04	± 16.0	≤ 8.0
				1	± 0.025	≤ 0.012	± 2.5	≤ 1.2	± 0.08	≤ 0.04	± 8.0	≤ 4.0
				2	± 0.030	≤ 0.014	± 1.5	≤ 0.7	± 0.08	≤ 0.04	± 4.0	≤ 2.0
P10**	D10 DL10	DF10ST DFL10ST	F144055M	1	± 0.025	≤ 0.012	± 2.5	≤ 1.2	± 0.12	≤ 0.08	± 12.0	≤ 8.0
				5	± 0.075	≤ 0.030	± 1.5	≤ 0.6	± 0.12	≤ 0.08	± 2.4	≤ 1.6
				10	± 0.100	≤ 0.040	± 1.0	≤ 0.4	± 0.12	≤ 0.08	± 1.2	≤ 0.8
P20	D200	DF30ST	F144056M	2	± 0.10	≤ 0.030	± 5.0	≤ 1.5	± 0.2	≤ 0.1	± 10.0	≤ 5.0
				10	± 0.10	≤ 0.050	± 1.0	≤ 0.5	± 0.2	≤ 0.1	± 2.0	≤ 1.0
				20	± 0.20	≤ 0.060	± 1.0	≤ 0.3	± 0.2	≤ 0.1	± 1.0	≤ 0.5
P100	D200	DF100ST	F144057M	10	± 0.35	≤ 0.10	± 3.5	≤ 1.0	± 0.8	≤ 0.3	± 8.0	≤ 3.0
				50	± 0.40	≤ 0.12	± 0.8	≤ 0.24	± 0.8	≤ 0.3	± 1.6	≤ 0.6
				100	± 0.80	≤ 0.15	± 0.8	≤ 0.15	± 0.8	≤ 0.3	± 0.8	≤ 0.3
P200	D200 D300	DF200ST DF300ST	F144058M	20	± 0.50	≤ 0.20	± 2.5	≤ 1.0	± 1.6	≤ 0.6	± 8.0	≤ 3.0
				100	± 0.80	≤ 0.25	± 0.8	≤ 0.25	± 1.6	≤ 0.6	± 1.6	≤ 0.6
				200	± 1.60	≤ 0.30	± 0.8	≤ 0.15	± 1.6	≤ 0.6	± 0.8	≤ 0.3
P1000	D1000 D1200	DF1000ST DF1200ST	F144059M	100	± 3.0	≤ 0.6	± 3.0	≤ 0.6	± 8.0	≤ 3.0	± 8.0	≤ 3.0
				500	± 4.0	≤ 1.0	± 0.8	≤ 0.2	± 8.0	≤ 3.0	± 1.6	≤ 0.6
				1000	± 8.0	≤ 1.5	± 0.8	≤ 0.15	± 8.0	≤ 3.0	± 0.8	≤ 0.3
P5000***	D5000		F144066	500	± 12	≤ 3	± 2.4	≤ 0.6	± 40	≤ 15.0	± 8.0	≤ 3.0
				2500	± 15	≤ 5	± 0.6	≤ 0.2	± 40	≤ 15.0	± 1.6	≤ 0.6
				5000	± 30	≤ 8	± 0.6	≤ 0.16	± 40	≤ 15.0	± 0.8	≤ 0.3
P10mL***	D10mL		F144067	1000	± 30	≤ 6	± 3.0	≤ 0.6	± 60	≤ 30.0	± 6.0	≤ 3.0
				5000	± 40	≤ 10	± 0.8	≤ 0.2	± 60	≤ 30.0	± 1.2	≤ 0.6
				10000	± 60	≤ 16	± 0.6	≤ 0.16	± 60	≤ 30.0	± 0.6	≤ 0.3
PIPETMAN® MULTICHANNEL												
P8x10 P12x10	D10 DL10	DF10ST DFL10ST	F144068 F144069	1	± 0.08	≤ 0.05	± 8.0	≤ 5.0	± 0.24	≤ 0.16	± 24.0	≤ 16.0
				5	± 0.20	≤ 0.10	± 4.0	≤ 2.0	± 0.24	≤ 0.16	± 4.8	≤ 3.2
				10	± 0.20	≤ 0.10	± 2.0	≤ 1.0	± 0.24	≤ 0.16	± 2.4	≤ 1.6
P8x20 P12x20	DL10 D200	DFL10ST DF30ST	F144070 F144071	2	± 0.10	≤ 0.08	± 5.0	≤ 4.0	± 0.4	≤ 0.20	± 20.0	≤ 10.0
				10	± 0.20	≤ 0.10	± 2.0	≤ 1.0	± 0.4	≤ 0.20	± 4.0	≤ 2.0
				20	± 0.40	≤ 0.20	± 2.0	≤ 1.0	± 0.4	≤ 0.20	± 2.0	≤ 1.0
P8x200 P12x200	D200 D300	DF200ST DF300ST	F144072 F144073	20	± 0.50	≤ 0.25	± 2.5	≤ 1.25	± 3.2	≤ 1.2	± 16.0	≤ 6.0
				100	± 1.00	≤ 0.40	± 1.0	≤ 0.4	± 3.2	≤ 1.2	± 3.2	≤ 1.2
				200	± 2.00	≤ 0.50	± 1.0	≤ 0.25	± 3.2	≤ 1.2	± 1.6	≤ 0.6
P8x300 P12x300	D200 D300	DF200ST DF300ST	F144074 F144075	30	± 1.00	≤ 0.35	± 3.33	≤ 1.17	± 8.0	≤ 3.0	± 26.67	≤ 10.0
				150	± 1.50	≤ 0.60	± 1.0	≤ 0.4	± 8.0	≤ 3.0	± 5.33	≤ 2.0
				300	± 3.00	≤ 1.00	± 1.0	≤ 0.33	± 8.0	≤ 3.0	± 2.67	≤ 1.0

*CV means Coefficient of Variation

Gilson maximum permissible errors are guaranteed only when PIPETMAN® pipettes are used with the recommended PIPETMAN® DIAMOND Tips.

**P10 model can be used up to 0.5 µL.

***P5000 and P10mL do not have tip ejectors.



GILSON PIPETTE SPECIFICATIONS

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MICROMAN® E											
Model	Capillary Piston	Part Number	Volume (µL)	Maximum Permissible Errors							
				Gilson				ISO 8655			
				Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*
M10E	CP10 CP10ST	FD10001	1	± 0.09	≤ 0.03	± 9.0	≤ 3.0	± 0.2	≤ 0.1	± 20.0	≤ 10.0
			5	± 0.10	≤ 0.03	± 2.0	≤ 0.6	± 0.2	≤ 0.1	± 4.0	≤ 2.0
			10	± 0.15	≤ 0.06	± 1.5	≤ 0.6	± 0.2	≤ 0.1	± 2.0	≤ 1.0
M25E	CP25 CP25ST	FD10002	3	± 0.25	≤ 0.08	± 8.3	≤ 2.7	± 0.7	≤ 0.3	± 23.33	≤ 10.0
			10	± 0.27	≤ 0.08	± 2.7	≤ 0.8	± 0.7	≤ 0.3	± 7.0	≤ 3.0
			25	± 0.30	≤ 0.10	± 1.2	≤ 0.4	± 0.7	≤ 0.3	± 2.8	≤ 1.2
M50E	CP50 CP50ST	FD10003	20	± 0.34	≤ 0.20	± 1.7	≤ 1.0	± 0.7	≤ 0.3	± 3.5	≤ 1.5
			50	± 0.70	≤ 0.30	± 1.4	≤ 0.6	± 0.7	≤ 0.3	± 1.4	≤ 0.6
M100E	CP100 CP100ST	FD10004	10	± 0.50	≤ 0.20	± 5.0	≤ 2.0	± 1.5	≤ 0.6	± 15.0	≤ 6.0
			50	± 0.75	≤ 0.30	± 1.5	≤ 0.6	± 1.5	≤ 0.6	± 3.0	≤ 1.2
			100	± 1.00	≤ 0.40	± 1.0	≤ 0.4	± 1.5	≤ 0.6	± 1.5	≤ 0.6
M250E	CP250 CP250ST	FD10005	50	± 1.50	≤ 0.30	± 3.0	≤ 0.6	± 6	≤ 2.0	± 12.0	≤ 4.0
			100	± 1.70	≤ 0.30	± 1.7	≤ 0.3	± 6	≤ 2.0	± 6.0	≤ 2.0
			250	± 2.50	≤ 0.50	± 1.0	≤ 0.2	± 6	≤ 2.0	± 2.4	≤ 0.8
M1000E	CP1000 CP1000ST	FD10006	100	± 3.0	≤ 1.6	± 3.0	≤ 1.6	± 12	≤ 4.0	± 12.0	≤ 4.0
			500	± 5.0	≤ 2.5	± 1.0	≤ 0.5	± 12	≤ 4.0	± 2.4	≤ 0.8
			1000	± 8.0	≤ 4.0	± 0.8	≤ 0.4	± 12	≤ 4.0	± 1.2	≤ 0.4

*CV means Coefficient of Variation

DISTRIMAN®											
Description			Part Number								
DISTRIMAN (1 µL to 1.25 mL)			F164001								
DISTRITIPS®											
DISTRITIPS (Pack of 50)	Aliquot Range	Part Number	Volume (µL)	Maximum Permissible Errors							
				Gilson				ISO 8655			
				Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*
125 µL Micro Micro ST**	1-12.5 µL	F164100 F164130	2	± 0.100	≤ 0.080	± 5.0	≤ 4.0	± 0.2	≤ 0.1	± 10.0	≤ 5.0
			5	± 0.125	≤ 0.075	± 2.5	≤ 1.5	± 0.2	≤ 0.1	± 4.0	≤ 2.0
			10	± 0.200	≤ 0.100	± 2.0	≤ 1.0	± 0.2	≤ 0.1	± 2.0	≤ 1.0
1250 µL Mini Mini ST**	10-125 µL	F164110 F164140	20	± 0.80	≤ 0.20	± 4.0	≤ 1.0	± 1.5	≤ 0.6	± 7.5	≤ 3.0
			50	± 1.00	≤ 0.40	± 2.0	≤ 0.8	± 1.5	≤ 0.6	± 3.0	≤ 1.2
			100	± 1.00	≤ 0.60	± 1.0	≤ 0.6	± 1.5	≤ 0.6	± 1.5	≤ 0.6
12.5 mL Maxi Maxi ST**	0.1-1.25 mL	F164120 F164150	200	± 6.0	≤ 1.0	± 3.0	≤ 0.5	± 12.0	≤ 4.0	± 6.0	≤ 2.0
			500	± 7.5	≤ 1.5	± 1.5	≤ 0.3	± 12.0	≤ 4.0	± 2.4	≤ 0.8
			1000	± 10.0	≤ 2.5	± 1.0	≤ 0.25	± 12.0	≤ 4.0	± 1.2	≤ 0.4

*CV means Coefficient of Variation

**ST means pre-sterilized syringes (individually wrapped)



GILSON PIPETTE SPECIFICATIONS

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PLATEMASTER®													
Model	PIPETMAN® DIAMOND Tips			Part Number	Volume (µL)	Maximum Permissible Errors							
						Gilson				ISO 8655			
						Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (%CV)*
P20	D200 DS200**	D200ST DS200ST**	DF100ST DF200ST DFS200ST**	F110761	0.5	± 0.12	≤ 0.10	± 24.0	≤ 20.00	± 0.40	≤ 0.20	± 80.00	≤ 40.0
					10	± 0.12	≤ 0.10	± 1.2	≤ 1.0	± 0.40	≤ 0.20	± 4.0	≤ 2.0
					20	± 0.20	≤ 0.18	± 1.0	≤ 0.9	± 0.40	≤ 0.20	± 2.0	≤ 1.0
P220	D200 DS200* D300	D200ST DS200ST** D300ST	DF200ST DFS200ST** DF300ST	F110762	2	± 0.12	≤ 0.15	± 6.0	≤ 7.5	± 8.00	≤ 3.00	± 400.0	≤ 150.0
					5	± 0.25	≤ 0.18	± 5.0	≤ 3.5	± 8.00	≤ 3.00	± 160.0	≤ 60.0
					20	± 0.40	≤ 0.30	± 2.0	≤ 1.5	± 8.00	≤ 3.00	± 40.0	≤ 15.0
					100	± 1.00	≤ 0.80	± 1.0	≤ 0.8	± 8.00	≤ 3.00	± 8.0	≤ 3.0
					200	± 1.60	≤ 0.80	± 0.8	≤ 0.4	± 8.00	≤ 3.00	± 4.0	≤ 1.5
					220	± 1.80	≤ 0.80	± 0.8	≤ 0.36	± 8.00	≤ 3.00	± 3.64	≤ 1.4

*CV means Coefficient of Variation

*Validated for use with 384-well plates.

DISPENSAN®													
Model	Part Number	Volume Range	Scaling (mL)	Maximum Permissible Errors									
				Gilson				ISO 8655					
				Systematic Error (mL)	Random Error (mL)	Systematic Error (%)	Random Error (%CV)*	Systematic Error (mL)	Random Error (mL)	Systematic Error (%)	Random Error (%CV)*		
DISPENSAN 2.5 mL	F110101	0.25-2.5 mL	0.05	± 0.012 ± 0.012 ± 0.012	≤ 0.002 ≤ 0.002 ≤ 0.002	± 4.800 ± 0.960 ± 4.800	≤ 0.800 ≤ 0.160 ≤ 0.080	± 0.030 ± 0.030 ± 0.030	≤ 0.010 ≤ 0.010 ≤ 0.010	± 12.000 ± 2.400 ± 1.200	≤ 4.000 ≤ 0.800 ≤ 0.400		
DISPENSAN 5.0 mL	F110102	0.5-5 mL	0.10	± 0.030 ± 0.030 ± 0.030	≤ 0.005 ≤ 0.005 ≤ 0.005	± 6.000 ± 1.200 ± 6.000	≤ 1.000 ≤ 0.200 ≤ 0.100	± 0.030 ± 0.030 ± 0.030	≤ 0.010 ≤ 0.010 ≤ 0.010	± 6.000 ± 1.200 ± 0.600	≤ 2.000 ≤ 0.400 ≤ 0.200		
DISPENSAN 10 mL	F110103	1-10 mL	0.20	± 0.060 ± 0.060 ± 0.060	≤ 0.010 ≤ 0.010 ≤ 0.010	± 6.000 ± 1.200 ± 6.000	≤ 1.000 ≤ 0.200 ≤ 0.100	± 0.060 ± 0.060 ± 0.060	≤ 0.020 ≤ 0.020 ≤ 0.020	± 6.000 ± 1.200 ± 0.600	≤ 2.000 ≤ 0.400 ≤ 0.200		
DISPENSAN 25 mL	F110104	2.5-25 mL	0.50	± 0.150 ± 0.150 ± 0.150	≤ 0.025 ≤ 0.025 ≤ 0.025	± 6.000 ± 1.200 ± 6.000	≤ 1.000 ≤ 0.200 ≤ 0.100	± 0.150 ± 0.150 ± 0.150	≤ 0.050 ≤ 0.050 ≤ 0.050	± 0.588 ± 1.200 ± 0.600	≤ 2.000 ≤ 0.400 ≤ 0.200		
DISPENSAN 50 mL	F110105	5-50 mL	1.00	± 0.300 ± 0.300 ± 0.300	≤ 0.050 ≤ 0.050 ≤ 0.050	± 6.000 ± 1.200 ± 6.000	≤ 1.000 ≤ 0.200 ≤ 0.100	± 0.300 ± 0.300 ± 0.300	≤ 0.100 ≤ 0.100 ≤ 0.100	± 6.000 ± 1.200 ± 0.600	≤ 2.000 ≤ 0.400 ≤ 0.200		

*CV means Coefficient of Variation