

## Supplementary Material: Pneumatic Pressure-driven Device Concentration Data

PBS/Flu without swab

Test #	Max Theoretical Precon.	Actual Precon.	% of Theoretical Achieved
1	50x	10x	20
2	21x	0x	0
3	37x	10x	27
4	22x	8.5x	39
5	15.5x	7.6x	49
6	16.7x	15.7x	97
7	16.7x	3.3x	20
8	12.5x	5.2x	42
9	6.8x	1.8x	26
10	22.2x	3.2x	14
11	11.8x	9x	76
12	16.7x	2.24x	13
13	40x	10.4x	26
14	40x	12.8x	32
		Average	34.35714286
		Std. Deviation	25.74313095
		Std. Error	6.880141149
		Variance	615.372449

PBS/Flu with Swab

Test #	Max Theoretical Precon.	Actual Precon.	% of Theoretical Achieved
1	25x	25x	100
2	66.7x	49.6x	74
3	40x	19.1x	48
4	22x	19.8x	90
5	100x	61x	61
6	33x	33x	100
7	27x	19x	70
8	100x	77x	77
9	100x	42x	42
10	8x	6x	75
11	57x	47x	82
12	19x	10x	53
13	50x	36x	72
14	20x	20x	100
15	22x	21x	95
16	40x	40x	100
17	27x	13x	48
18	29x	16x	55
19	40x	40x	100
		Average	75.89473684
		Std. Deviation	20.34397191
		Std. Error	4.667227245
		Variance	392.0941828

Urine/HCG with Swab

Test #	Max. Theoretical Precon	Actual Precon.	% of Theoretical Achieved
1	100x	40x	40
2	111x	35x	32
3	250x	124x	50
4	91x	40x	44
5	63x	42x	67
6	47x	16x	34
7	100x	45x	45
8	143x	66x	46
9	91x	48x	53
10	182x	102x	56
11	125x	59x	47
12	333x	109x	33
13	400x	165x	41
14	190x	95x	50
15	86x	77x	90
16	91x	39x	43
17	125x	75x	60
18	100x	59x	59
		Average	49.44444444
		Std. Deviation	13.92087819
		Std. Error	3.281182457
		Variance	183.0246914