

Filtration efficiency test

			0,3µm	0,5µm	3,0µm	
Unsterilised material (from package)	White layer only	Sample 1 (n = 4)	3/4/2020	46.40%	68.44%	92.38%
		Sample 2 (n = 4)	3/4/2020	51.13%	73.49%	93.41%
	Averaged			48.76%	70.97%	92.89%
	Intersample Standard Dev.			3.34%	3.58%	0.73%
	Blue layer only	Sample 3 (n = 4)	3/4/2020	48.37%	68.97%	92.87%
		Sample 4 (n = 4)	3/4/2020	49.91%	70.65%	93.90%
	Averaged			49.14%	69.81%	93.39%
	Intersample Standard Dev.			1.09%	1.19%	0.73%
	Single Layer	Sample 5 (n = 4)	3/4/2020	70.42%	90.17%	99.65%
		Sample 6 (n = 4)	3/4/2020	69.74%	89.19%	99.84%
Averaged			70.08%	89.68%	99.74%	
Intersample Standard Dev.			0.48%	0.70%	0.13%	
Double Layer	Sample 7 (n = 4)	3/4/2020	87.99%	98.35%	99.98%	
	Sample 8 (n = 4)	3/4/2020	87.38%	98.21%	99.98%	
	Sample 53 (n = 4)	3/4/2020	84.42%	97.50%	99.96%	
Averaged			86.60%	98.02%	99.97%	
Intersample Standard Dev.			1.91%	0.46%	0.01%	
Double Layer, reversed	Sample 9 (n = 4)	3/4/2020	85.35%	97.79%	99.96%	
	Sample 10 (n = 4)	3/4/2020	83.95%	97.34%	100.00%	
Averaged			84.65%	97.57%	99.98%	
Intersample Standard Dev.			0.99%	0.32%	0.03%	

Steam Sterilised (15min, 121 degrees Celsius, 2 atm)

Double Layer, after use 20 minutes	Sample 11 (n = 4)	3/4/2020	87.64%	98.64%	100.00%
	Sample 12 (n = 4)	3/4/2020	87.54%	98.63%	100.00%
Averaged			87.59%	98.63%	100.00%
Intersample Standard Dev.			0.07%	0.00%	0.00%
Triple layer	Sample 13 (n = 4)	3/4/2020	94.10%	99.51%	99.98%
	Sample 14 (n = 4)	3/4/2020	93.58%	99.39%	100.00%
Averaged			93.84%	99.45%	99.99%
Intersample Standard Dev.			0.37%	0.08%	0.01%
Single Layer, 1x sterilized	Sample 15 (n = 4)	3/4/2020	66.15%	87.14%	99.40%
	Sample 16 (n = 4)	3/4/2020	66.58%	87.24%	99.73%
Averaged			66.37%	87.19%	99.57%
Intersample Standard Dev.			0.31%	0.07%	0.23%
Double Layer, 1x sterilized	Sample 17 (n = 4)	3/4/2020	80.63%	95.91%	100.00%
	Sample 18 (n = 4)	3/4/2020	80.16%	95.67%	99.98%
Averaged			80.39%	95.79%	99.99%
Intersample Standard Dev.			0.33%	0.17%	0.01%
Triple layer, 1x sterilized	Sample 19 (n = 4)	3/4/2020	87.98%	98.35%	99.96%
	Sample 20 (n = 4)	3/4/2020	88.57%	98.52%	99.98%
	Sample 21 (n = 4)	12/5/2020	82.74%	98.94%	99.91%
	Sample 22 (n = 4)	12/5/2020	83.71%	99.02%	99.97%
	Sample 23 (n = 4)	12/5/2020	83.77%	98.98%	99.99%
	Sample 24 (n = 4)	12/5/2020	83.91%	98.95%	99.97%
Averaged			85.11%	98.44%	99.97%
Intersample Standard Dev.			2.49%	0.28%	0.03%

Triple layer, 2x sterilized	Sample 25 (n = 4)	12/5/2020	89.08%	99.52%	99.97%
	Sample 26 (n = 4)	12/5/2020	86.52%	99.26%	99.93%
	Sample 27 (n = 4)	12/5/2020	87.97%	99.42%	99.97%
	Sample 28 (n = 4)	12/5/2020	86.51%	99.31%	99.96%
Averaged			87.52%	99.38%	99.96%
Intersample Standard Dev.			1.25%	0.12%	0.02%
Triple layer, 3x sterilized	Sample 29 (n = 4)	12/5/2020	81.71%	98.74%	99.97%
	Sample 30 (n = 4)	12/5/2020	82.88%	98.94%	99.92%
	Sample 31 (n = 4)	12/5/2020	83.66%	99.01%	99.97%
	Sample 32 (n = 4)	12/5/2020	82.07%	98.80%	99.99%
Averaged			82.58%	98.87%	99.97%
Intersample Standard Dev.			0.87%	0.12%	0.03%
Triple layer, 4x sterilized	Sample 33 (n = 4)	12/5/2020	86.00%	99.27%	99.96%
	Sample 34 (n = 4)	12/5/2020	86.36%	99.29%	99.90%
	Sample 35 (n = 4)	12/5/2020	85.60%	99.21%	99.97%
	Sample 36 (n = 4)	12/5/2020	85.27%	99.17%	99.92%
Averaged			85.81%	99.23%	99.94%
Intersample Standard Dev.			0.47%	0.05%	0.03%
Triple layer, 5x sterilized	Sample 37 (n = 4)	12/5/2020	83.61%	99.00%	99.95%
	Sample 38 (n = 4)	12/5/2020	84.71%	99.16%	99.98%
	Sample 39 (n = 4)	12/5/2020	83.19%	98.98%	99.96%
	Sample 40 (n = 4)	12/5/2020	82.42%	98.88%	99.99%
Averaged			83.48%	99.00%	99.97%
Intersample Standard Dev.			0.96%	0.11%	0.02%

Comparison with commercial Masks & Respirators

Surgical Mask	Sample 41	12/5/2020	55.89%	89.26%	98.96%
	Sample 42	12/5/2020	51.48%	87.47%	98.01%
	Sample 43	12/5/2020	57.64%	89.86%	99.48%
	Sample 44	12/5/2020	53.07%	87.84%	99.22%
Averaged			54.52%	88.61%	98.92%
Intersample Standard Dev.			2.77%	1.13%	0.64%
Disposable Face Mask FFP2	Sample 45	12/5/2020	93.55%	99.52%	100.00%
	Sample 46	12/5/2020	93.93%	99.58%	100.00%
	Sample 47	12/5/2020	94.35%	99.61%	100.00%
	Sample 48	12/5/2020	94.47%	99.57%	100.00%
Averaged			94.08%	99.57%	100.00%
Intersample Standard Dev.			0.42%	0.04%	0.00%
3M 8320 FFP2 NR D Mask	Sample 49	12/5/2020	98.91%	99.90%	99.91%
	Sample 50	12/5/2020	95.91%	99.65%	100.00%
	Sample 51	12/5/2020	98.10%	99.78%	100.00%
	Sample 52	12/5/2020	96.84%	99.65%	99.83%
Averaged			97.44%	99.75%	99.94%
Intersample Standard Dev.			1.33%	0.12%	0.08%