

# External Lab Tests for Electrostatic Filter of Micro100™<sup>1</sup>

- ❖ **ASHRAE 52.2 test; KCI Contaminant.** Temperature and Humidity conditioning of electrostatic filter media by LMS Technologies. Initial efficiency of flat sheet media was measured at rated velocity according to ASHRAE 52.2 standard's particle channel sizes. Upon completion of efficiency measurement, the media was exposed to 99C° plus 95% humidity for a period of 4 hours. The media was dried in ambient environment for at least 3 hours or until operator was assured that the media was completely dry. Secondary efficiency test on the conditioned sample was performed and as such, the effect of the conditioning step was measured.

Electrostatic Filter Size Range (micron)	Initial % Efficiency	Condition % Efficiency
DP ("H2O)	0.080	0.083
0.3-0.4	99.802	98.288
0.4-0.55	99.910	99.123
0.55-0.7	99.974	99.635
0.7-1.0	99.983	99.817
1.0-1.3	99.995	99.914
1.3-1.6	100.000	99.950
1.6-2.2	100.000	99.990
2.2-3.0	100.000	99.998
3.0-4.0	100.000	100.000
4.0-5.5	100.000	100.000
5.5-10.0	100.000	100.000

- ❖ **NIOSH N-99 TESTS**

Ultrasonic Sample Evaluation #5 for **N99 Filters (NaCl tested)**

All filters of 3.218" diameter; All tests done on 2.875" test plate<sup>2</sup>.

Flow Rate (LPM)	Target Wight (gr.)	Disc Wight (gr.)	Resistance (initial)	Penetration (initial)	Penetration (Peak)	Time (minutes)
42.5	2.094	2.084	13.30	0.051	0.082	9

<sup>2</sup>The above results refer to the tested sizes; Micro100™ filter has almost similar dimensions.

- ❖ **BACTERIAL FILTRATION Efficiency & Differential Pressure.**

Performed by **NELSON Laboratories, L.L.C** Lab

Challenge Level (CFU)	Total CFU recovered	Filtration Efficiency	Delta P mm H <sub>2</sub> O/cm <sup>2</sup>
6.9X10 <sup>6</sup>	0	>99.99999%	1.5
6.9X10 <sup>6</sup>	0	>99.99999%	1.5

- ❖ **VFE (VIRUS) AT AN INCREASED CHALLENGE LEVEL**

Performed by **NELSON Laboratories, L.L.C** Lab

Challenge Level (PFU)	Total PFU Recovered	Filtration Efficiency
4.2X10 <sup>6</sup>	<1	99.99998%
4.2X10 <sup>6</sup>	<1	99.99998%

<sup>1</sup>Above Tests were not performed on Micro100™ but refer to the same type of filter used in Micro100™.

The information supplied in this document is for guidance only, and should not be construed as a warranty.

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