

External Lab Tests for Electrostatic Filter of Micro100™

- ❖ **ASHRAE 52.2 test;** KCl 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	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** (6-Jan-03)
Ultrasonic Sample Evaluation #5 for **N99 Filters (NaCl tested)**
All filters of 3.218" diameter; All tests done on 2.875" test plate.

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

- ❖ **BACTERIAL FILTRATION Efficiency & Differential Pressure.**
Performed by **NELSON Laboratories**, Hollinee L.L.C Lab Number 224853, Test Date 19 Dec 2002

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

- ❖ **VFE (VIRUS) AT AN INCREASED CHALLENGE LEVEL**
Performed by **NELSON Laboratories**, Hollinee L.L.C Lab Number 224917

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