



Life's Resources, Inc.

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FAX Transmission

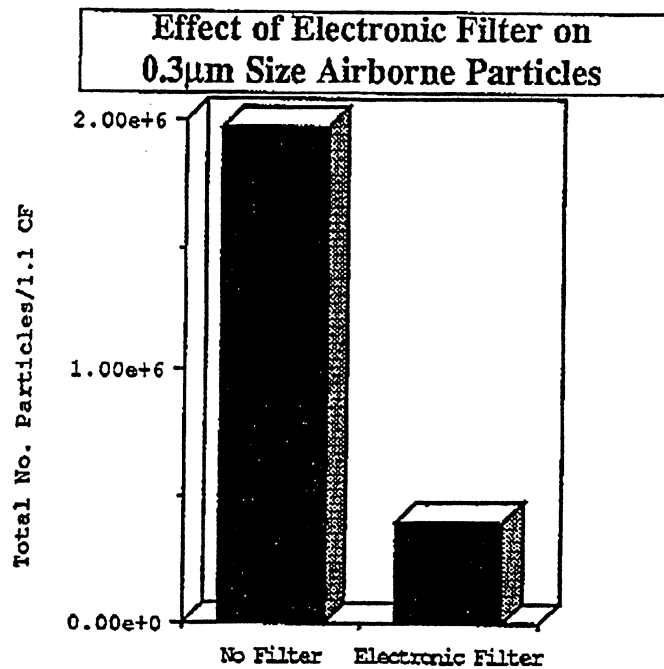
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DATE: October 3, 1991

TO: W.E. Pick
Engineering Dynamics Ltd.
FAX 613-257-7397

FROM: Kerby F. Fannin, Ph.D.

SUBJECT: Multiple pass aerosol tests with 12" X 24" electronic filter



300 CFM, 46% RH, 26 C, ave 3- 1min samples, 7 CF chamber

Creating Environments You Can Live WithSM

Environmental Dynamics Group

Summary of Particulate Removal Capacity

Obtained from Independent Test Laboratories

Room Test

Room Size	11,000 cu. ft. (311.5 cu. M)
Air Flow Rate	400 CFM (0.19 M ³ /second)
Particle Size Measured	0.3 – 0.5 Microns
Filter Used for Test	Panel Air Cleaner with aluminum center screen 12"x24"x1" (305mmx 610mmx25.4mm)
Decrease in Particle Count in One Hour:	80%
Decrease in Particle Count in Two Hours:	97.2%

[Test performed by the University of Waterloo]

House Test

Test House Size	Estimated at 10,000 cu. ft. (283 cu. M)			
Air Flow Rate	Standard Domestic Central Heater Air Flow Rate Estimated at 1200 CFM (0.556 M ³ /second)			
Filter Used for Test	Panel Air Cleaner with aluminum center screen 20"x20"x1" (508mm 508mmx25.4mm)			
Particle Size (Microns)	<u>0.3 – 0.5</u>	<u>0.5 – 1.0</u>	<u>1.0 – 5.0</u>	<u>7.5</u>
Initial Count:	700,000	425,000	100,000	9,000
Count After Stabilization: (Approximately 10 Hours)	18,000	6,000	<1,000	<1,000
Percent Reduction:	97%	98.6%	>99%	>99%

[Test performed by Health & Welfare, Canada]

Chamber Test

Chamber Size:	7 cu. ft. (.20 cu. M)
Air Flow Rate:	300 CFM (0.14 M ³ /second)
Particle Size Measured:	0.3 Microns
Filter Used for Test:	Panel Air Cleaner 12"x24"x1" (305mmx610mmx25.4mm)
Decrease in 0.3 Micron Particles In One Minute:	80% (Average of Three Tests at 46% Relative Humidity) 82% (Average of Three Tests at 59% Relative Humidity)

[Test performed by Life Resources Institute]

Particle removal comparison to 99.97% HEPA filter

Room Size	260 cu. ft. (7.36 cu. M)
Air Flow Rate	300 CFM (0.14 M ³ /seconds)
Filter Used for Test	Panel Air Cleaner 12"x 24"x1" (305mm 610mmx25.4mm)
HEPA Filter Removed	94% of 0.3 Micron Size Particles in 15 Minutes
DYNAMIC Filter Removed	89% of 0.3 Micron Size Particles in 15 Minutes

[Test performed by Life Resources Institute]