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very seriously**

Coronavirus Test Data

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AtmosAir vs. Coronavirus – 4 June 2020



Study Title: Virucidal Efficacy of a Test Substance for use on Inanimate Nonporous Surfaces

Test Microorganism: Human Coronavirus, Strain 229E, ATCC VR-740

Standardized Test Method: ASTM E1053 Method

Result: 99.92% Reduction in 30 minutes

Test Parameters

- Test Substance Application: Fogging
- Contact Time: 30 Minutes
- Procedure Summary:

Sterile petri dish carriers were inoculated with a volume of virus suspension. The inoculated test carriers were dried at room temperature under laminar flow conditions. The control carrier was held covered for the 30 minute contact time, then harvested in the same manner as the test carriers. The output ionization of the AtmosAir SGMH-882 was applied to the test carriers for 30 minutes. The assay trays/plates were incubated for 7 days, and the assay was scored for the presence or absence of the test Virus (Spearman-Karber calculation).

		Test Results Replicate 1 30 minutes	Test Results Replicate 2 30 minutes	Test Results Replicate 3 30 minutes
Cell Control		0 0 0 0	0 0 0 0	0 0 0 0
Dilution	10 ⁻¹	0 0 0 +	0 0 0 +	0 0 0 0
	10 ⁻²	0 0 0 0	0 0 0 0	0 0 0 0
	10 ⁻³	0 0 0 0	0 0 0 0	0 0 0 0
	10 ⁻⁴	0 0 0 0	0 0 0 0	0 0 0 0
	10 ⁻⁵	0 0 0 0	0 0 0 0	0 0 0 0
TCID ₅₀ per 0.1 ml		0.75 Log ₁₀	0.75 Log ₁₀	≤0.50 Log ₁₀
TCID ₅₀ per Carrier		1.05 Log ₁₀	1.05 Log ₁₀	≤0.80 Log ₁₀
Average Log ₁₀ Reduction			2.78 Log ₁₀	
Average Percent Reduction			99.92%	

Key: + = Virus recovered; 0 = Virus not recovered and/or no cytotoxicity observed; T = Cytotoxicity observed; [†]Taking cytotoxicity and neutralization controls into account.

Study Conclusion: The purpose of the study was to determine the viral efficacy of the AtmosAir SGMH-880 Series Bipolar ionizer against Human Coronavirus Strain 229E with no additional soil load incorporated into inoculum at a contact time of 30 minutes and at an exposure temperature of 25.2 to 25.6C, 46-47%RH.

The evaluated test device, the AtmosAir SGMH-880 demonstrated an average 2.78 Log₁₀ reduction (99.92%) in viral titer.

AtmosAir vs. Coronavirus – 11 Sept 2020



Study Title: Custom Virucidal Efficacy of a Device

Test Microorganism: Human Coronavirus, Strain 229E, ATCC VR-740

Host Cells: MRC-5 (ATCC CCL-171)

Test Parameters

- Test Substance Application: Fogging
- Test Articles Tested: Grey Fabric Face Mask
- Contact Time: 15 and 30 Minutes

Procedure Summary:

A volume of 0.200 ml of each virus was inoculated into the front and back of the test sample surfaces. The AtmosAir SGMH-880 was placed in a 1m³ aerosol chamber near the door of the chamber and about 2 feet from the masks. At the completion of each contact time, each inoculated area of the mask was cut and harvested. For the recovery controls, each of the untreated mask control surfaces were prepared in the same manner. The inoculated cell culture plates were incubated for 7 days. The assay was microscopically scored for the presence or absence of the virus (Spearman-Kärber calculations).

Study Conclusion: The purpose of the study was to determine the viral efficacy of the AtmosAir SGMH-880 Series Bipolar ionizer tested against one mask type, against Human Coronavirus Strain 229E at contact times of 15 and 30 minutes and at an exposure temperature of ambient room temperature.

Result: 99.44% Reduction in 15 and 30 minutes

		Test Sample for Grey Fabric - 15 minutes	Test Sample for Grey Fabric - 30 minutes
Dilution	Cell Control	0 0 0 0	0 0 0 0
	10 ^{-1.30}	0 0 0 0	0 0 0 0
	10 ^{-2.30}	0 0 0 0	0 0 0 0
	10 ^{-3.30}	0 0 0 0	0 0 0 0
	10 ^{-4.30}	0 0 0 0	0 0 0 0
	10 ^{-5.30}	0 0 0 0	0 0 0 0
	10 ^{-6.30}	0 0 0 0	0 0 0 0
TCID ₅₀ per 0.1 ml		≤ 0.80 Log ₁₀	≤ 0.80 Log ₁₀
Log Reduction		≥2.25 Log ₁₀	≥2.25 Log ₁₀
Percent Reduction		≥99.44%	≥99.44%

Key: + = Virus recovered; 0 = Virus not recovered and/or no cytotoxicity observed;
T = Cytotoxicity observed;

The evaluated test device, the AtmosAir SGMH-880 demonstrated a 2.25 Log₁₀ reduction (99.44%) in viral titer at 15 minutes



**We are your local authorized
AtmosAir™ dealer**

ProMedUSA Pte Ltd

111 North Bridge Road
#08-27 Peninsula Plaza
Singapore 179098

Tel: (65) 6836-9665
sales@promedusa.us

www.promedusa.us