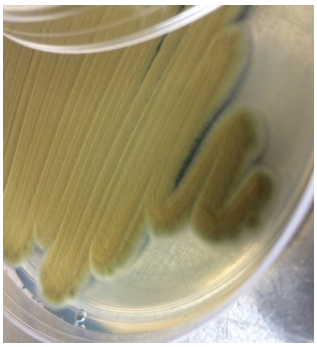
Results of the Study

Test Device	Microorganism	Inoculum Concentration (CFU/ml) or (PFU/ml)	Treatment Time Point	Recovery (CFU/m³) or (PFU/m³)	Percent Reduction vs. Time Zero	Log_{10} Reduction vs. Time Zero
Scientific Air Management S400	*C. cladosporioides* 16022	2.75E+07	Time Zero	4.03E+05	N/A	
			10 minutes	3.46E+04	91.4%	1.07
			20 minutes	5.33E+03	98.7%	1.88
			30 minutes	8.64E+02	99.8%	2.67

RESULTS

Test Microorganism Information

The following test microorganisms were selected for this test:



Cladosporium cladosporioides 16022

This heavily sporulating fungi is a dematiaceous mold, meaning that it is characterized by the olive-to-black pigmentation of its conidia and hyphae. It is prevalent in indoor and outdoor environments, and is a plant pathogen that affects wheat. Frequently isolated from air, *Cladiosporium* has a world-wide presence and is one of the early colonizers of humid indoor environments growing on such substrates as gypsum, paper, paint, and textiles. As a common allergen, this species has been known to induce hay fever and asthma in humans.

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Summary of the Procedure

- Bacterial test microorganisms are grown for 48 hours on appropriate solid/liquid media.
- After 24 hours of incubation, a purity streak is performed on each culture tube.
- Bacterial cultures used for test inoculum are evaluated for sterility, washed and concentrated in sterile phosphate buffered saline upon harvesting.
- Fungal test microorganisms are grown for 5-7 days on appropriate media.
- Fungal cultures used for test inoculum are washed and concentrated in sterile phosphate buffered saline upon harvesting.
- Fungal culture is diluted to target concentration.
- Bacterial cultures, fungal culture, and a virus stock are pooled to target concentrations.
- The test inoculum is split into two equal parts and added to two nebulizers. Liquid culture should not exceed 18ml per nebulizer.
- The chamber is setup and the safety checklist is completed prior to test initiation.
- The nebulizers are activated for 60 minutes to ensure target microbial concentrations are achieved prior to activation of the device.
- An SKC bio-sampler is used to take a time zero sample t
- o determine starting chamber concentration for baseline comparison.
- Device is activated for the study sponsor determined contact time. After each contact time, the SKC bio-samplers are activated for 10 minutes to determine microbial concentrations.
- Samples are enumerated using standard dilution and plating techniques.
- Microbial concentrations are determined after 24-48 hours of incubation for bacteria and viruses. Fungal plates are incubated at room temperature for 5-7 days.
- Reductions of microorganisms are calculated relative to concentration at Time Zero.

Study Timeline

C. cladosporoides 16022

01 APR 2016	07 APR 2016	07 APR 2016	07 APR 2016	12 APR 2016	14 APR 206

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Testing Parameters used in this Study (cont.)

Test Microorganism	*C. cladosporoides* 16022	
Culture Growth Media	Potato Dextrose Agar (PDA)	
Culture Growth Time	5-7 days	
Culture Dilution Media	Phosphate Buffered Saline	
Target Concentration	$\geq 1.0 \times 10^5$ CFU/m^3	
Enumeration Media	PDA supplemented with Kanamycin	
Enumeration Type	Spread plating	
Enumeration Incubation Time	5-7 days	

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Control Results

Neutralization Method: Not applicable
Growth Confirmation: Confirmed
Media Sterility: Sterile

Calculations

$$\text{Percent Reduction} = \left(\frac{B-A}{B}\right) \times 100$$

Where:
B = Number of viable test microorganisms on the control carriers immediately after inoculation
A = Number of viable test microorganisms on the test carriers after the contact time

$$\text{Log}_{10}\text{Reduction} = \text{Log}\left(\frac{B}{A}\right)$$

Where:
B = Number of viable test microorganisms on the control carriers immediately after inoculation
A = Number of viable test microorganisms on the test carriers after the contact time

$$\text{CFU/m}^3 = 1000 \times \left(\frac{\frac{\text{CFU}}{\text{ml}} \times (V_s)}{T_s(12.5)}\right)$$

Where:
V_S = Bio-sampler volume (ml)
T_S = Time sampled (min)

The results of this study apply to the tested substances(s) only. Extrapolation of findings to related materials is the responsibility of the Sponsor.

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