

Timilon Corporation

TEST REPORT

SCOPE OF WORK

Non-standardized Test Method: Microbial Reduction Rate Test

PRODUCT

EnviroKlenz HVAC and EnviroKlenz Air Cartridge

REPORT NUMBER

104371720COL-003

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MICROBIOLOGICAL PERFORMANCE TEST REPORT

Client		TIMILON TECHNOLOGY ACQUISITIONS, LLC 24301 Waldon Center Dr. Suite 101 Bonita Springs, FL 34134
Project No.		G104371720
Sample	Product	Air Purifier
	Model	EnviroKlenz Mobile Air System UV Light model HVAC Filter and EnvironKlenz Filter ONLY
	Identification No.	COL2005071145-001
	Date Received	5/07/2020
	Condition	New/good
	Production or Prototype	Production
Procedural	Engineer	Nicholas Unger
	Reviewer	Lee Moomaw
	Dates Tested	09/07/2020 – 09/11/2020
	Report Date	09/16/2020
	Test Temperature and Relative Humidity	23°C, 55%
Standard	Non-standardized Test Method: Microbial Reduction Rate Test	

In this test the Mobile Air system was used with the HEPA filter removed, and the UV light powered off. The only filter inside the unit under test was either the standard HVAC filter or the EnviroKlenz filter. The test unit was placed in a sealed test chamber measuring 1000ft³ and a microbial suspension was aspirated into the chamber. Air samples were taken from the test chamber once the unit was turned on, and then at client specified intervals over a period of 8 hours and then plated. The process was then repeated without the test unit in the chamber to provide the natural decay results. All plates were incubated overnight and viral growth on test plate was compared to that of the natural decay control.

Air sampling took place using an SKC BioStage Single-stage impactor for 30 seconds at 12L/min. Results below are for reference only.

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EnviroKlenz Air Cartridge Only Results:

Test Parameter		Test Result	Natural Decay Result	Units
Organism	Species	<i>Staphylococcus Epidermidis</i>		---
	ATCC No.	(ATCC 12228)		---
	Challenge Concentration	1.0 x 10 ⁹		CFU/mL
Samples	0	TNTC	TNTC (2628)	CFU
	2 Hours	TNTC	TNTC (2628)	CFU
	4 Hours	102	TNTC (2628)	CFU
	6 Hours	44	TNTC (2628)	CFU
	8 Hours	4	TNTC (2628)	99.9%
Results	--	For Reference Only		Reduction

Test Parameter		Test Result	Natural Decay Result	Units
Organism	Species	<i>Coliphage φX174</i>		---
	ATCC No.	(Item # 124425)		---
	Challenge Concentration	2.0 x 10 ⁹		PFU/mL
Samples	0	TNTC	TNTC (2628)	PFU
	2 Hours	0	TNTC (2628)	99.9%
	4 Hours	0	TNTC (2628)	99.9%
	6 Hours	0	TNTC (2628)	99.9%
	8 Hours	0	TNTC (2628)	99.9%
Results	--	For Reference Only		Reduction

Test Parameter		Test Result	Natural Decay Result	Units
Organism	Species	<i>E. coli</i>		---
	ATCC No.	#11229		---
	Challenge Concentration	8.8 x 10 ⁸		CFU/mL
Samples	0	TNTC	TNTC (2628)	CFU
	2 Hours	3	TNTC (2628)	99.9%
	4 Hours	0	102	CFU
	6 Hours	2	50	CFU
	8 Hours	0	7	CFU
Results	--	For Reference Only		Reduction

*The log reduction was not determined after 2 hours as the organism started to die off via natural decay.

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Date / Project Number	Engineer / Reviewer	Pages	Description of Change
October 23, 2020 G104371720	A.Mastronicolas N.Unger	All	<ul style="list-style-type: none"> Change "EnviroKlenz Mobile Air System – With UV Light" to "EnviroKlenz HVAC and EnviroKlenz Air Cartridge" Changed "HVAC FILTER ONLY" to "EnviroKlenz HVAC filter results:" Added % reduction for G and B hours in the first chart Added % reduction for hours 4, 6 and 8 in the second chart. Added %reduction at 2 hours then added text to state the log reduction was not determined after 2 hours as the organism started to die off via natural decay. To the third chart Changed "ENVIRONKLENZE FILTER ONLY" to "EnviroKlenz Air Cartridge Only Results:" Added the 8 hour % reduction to the fourth chart Listed the % reduction for 2-8 hours in the 5th chart Added % reduction at 2 hours then added text to state the log reduction was not determined after 2 hours as the organism started to die off via natural decay.

Completed by: Nicholas Unger
Title: Staff Engineer
Signature: Signature on File
Date: 16-SEP-2020

Reviewed by: Lee Moomaw
Title: Engineering Team Lead
Signature: Signature on File
Date: 16-SEP-2020