

# 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

**ISSUE DATE**

16-SEPT-2020

**REVISED DATE**

23-OCT-2020

**PAGES**

5

**DOCUMENT CONTROL NUMBER**

GFT-OP-10h (6-July-2017)

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**MICROBIOLOGICAL PERFORMANCE TEST REPORT**

<b>Client</b>		<b>TIMILON TECHNOLOGY ACQUISITIONS, LLC 24301 Waldon Center Dr. Suite 101 Bonita Springs, FL 34134</b>
<b>Project No.</b>		G104371720
<b>Sample</b>	<b>Product</b>	Air Purifier
	<b>Model</b>	EnviroKlenz Mobile Air System UV Light model HVAC Filter and EnvironKlenz Filter ONLY
	<b>Identification No.</b>	COL2005071145-001
	<b>Date Received</b>	5/07/2020
	<b>Condition</b>	New/good
	<b>Production or Prototype</b>	Production
<b>Procedural</b>	<b>Engineer</b>	Nicholas Unger
	<b>Reviewer</b>	Lee Moomaw
	<b>Dates Tested</b>	09/07/2020 – 09/11/2020
	<b>Report Date</b>	09/16/2020
	<b>Test Temperature and Relative Humidity</b>	23°C, 55%
<b>Standard</b>	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 1000ft<sup>3</sup> 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.

**MICROBIOLOGICAL PERFORMANCE TEST REPORT**

**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 <sup>9</sup>		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	--	<b>For Reference Only</b>		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 <sup>9</sup>		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	--	<b>For Reference Only</b>		Reduction

Test Parameter		Test Result	Natural Decay Result	Units
Organism	Species	<i>E. coli</i>		---
	ATCC No.	#11229		---
	Challenge Concentration	8.8 x 10 <sup>8</sup>		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	--	<b>For Reference Only</b>		Reduction

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

**MICROBIOLOGICAL PERFORMANCE TEST REPORT**

Date / Project Number	Engineer / Reviewer	Pages	Description of Change
October 23, 2020 G104371720	<p>A.Mastronicolas</p> <p style="text-align: center;"><i>AM</i></p> <hr/> <p>N.Unger</p> <p style="text-align: center;"><i>NU</i></p>	All	<ul style="list-style-type: none"> <li>• Change "EnviroKlenz Mobile Air System - With UV Light" to "EnviroKlenz HVAC and EnviroKlenz Air Cartridge"</li> <li>• Changed "HVAC FILTER ONLY" to "EnviroKlenz HVAC filter results:"</li> <li>• Added % reduction for 6 and 8 hours in the first chart</li> <li>• Added % reduction for hours 4, 6 and 8 in the second chart.</li> <li>• 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</li> <li>• Changed "ENVIRONKLENZE FILTER ONLY" to "EnviroKlenz Air Cartridge Only Results:"</li> <li>• Added the 8 hour % reduction to the fourth chart</li> <li>• Listed the % reduction for 2-8 hours in the 5<sup>th</sup> chart</li> <li>• 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.</li> </ul>

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