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EXCELITAS CANADA INC.
EFFICACY TEST REPORT

SCOPE OF WORK
Non-standardized Test Method: Microbial Reduction Rate Test

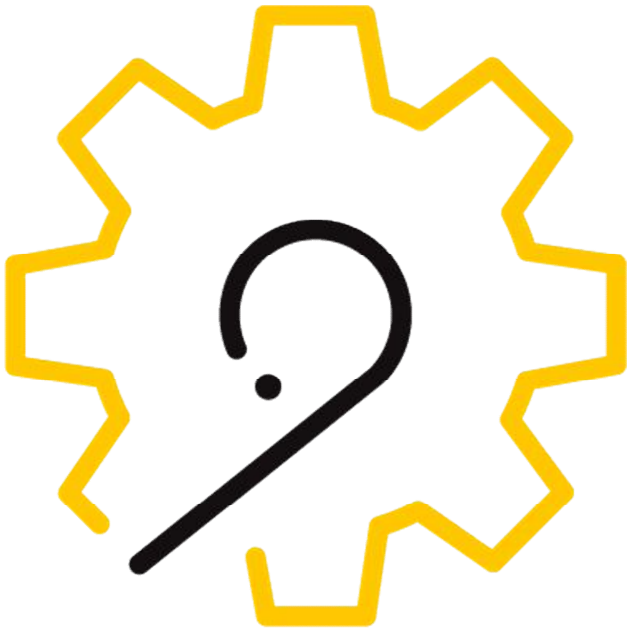
PRODUCT – Air Purifier

MODEL – LED Upper Air

REPORT NUMBER
104517635COL-001

ISSUE DATE **Revision Date:**
1/14/21 1/26/2021

PAGES 6



DOCUMENT CONTROL NUMBER
GFT-OP-10h (6-July-2017)

SECTION 1 EFFICACY STUDY SUMMARY

Client		**Excelitas Canada Inc. 2260 Argentia Rd Mississauga, ON L5N 6H7 Canada**
Project No.		G104517635
Sample	Product	Air Purifier
	Model	LED Upper Air
Procedural	Engineer	Amanda Mastronicolas
	Reviewer	Nicholas Unger
	Dates Tested	1/11/21 – 1/12/21
	Report Date	1/14/2021
Standard	Non-standardized Test Method: Microbial Reduction Rate Test	
Testing Facility	Intertek Microbiological Laboratory 1717 Arlingate Ln. Columbus, OH 43228 United States	

SECTION 2 TEST PROCEDURE

The test chamber measured 10'x10'x10' (1000 cubic ft) room. The unit was installed approximately 3 feet away from the ceiling of the chamber. A circular fan was placed in the room and turned generate approximately 160 CFM of air flow within the room. A microbial suspension was then aspirated into the chamber. Air samples were taken from the test chamber once the unit was turned on and sampling was taken every 15 minutes over a period of 2 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 the 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 (.424 cubic feet/min). Results below represent the percent reduction at 120 minutes.

SECTION 3 ORGANISMS

Organism Name	Organism Type	ATCC Number	Source
Phi X174 bacteriophage	small, non-enveloped virus	13706-B1	Carolina Bioscience

SECTION 3 EQUIPMENT

Equipment Type	Equipment No.	Calibration Due Date
Micropipette	CE 2587	6/12/2021
Incubator	CE 2381	7/7/2021
Balance	CE 1882	7/7/2021
Autoclave	CE 2376	Verify Before Use
Centrifuge	CE 2382	For Reference Only
Chamber	CE 1149	For Reference Only
Collision Nebulizer	CE 1139	For Reference Only
Refrigerator	CE 1157	For Reference Only
Pump	CE 1137	For Reference Only
Stopwatch	SW013	07/07/2021
Ambient Temperature/RH	CE 1179	For Reference Only

SECTION 4 MEDIA AND REAGENTS

Type	Manufacturer	Lot No	Expiration Date
Nutrient Agar	DIFCO	9346039	10/31/2024
PBS	Fisher	192736	08/01/2022

SECTION 5 SAMPLE ACQUISITION

Acquisition method	Shipped to Intertek
Description	Air Purifier
Model Number	LED Upper Air 0001
Arrival date	12/17/2020
Condition	New
Sample Identification No.	COL2012170910-001
Development Level	Prototype

SECTION 6 SUMMARY OF RESULTS

Fan Speed	Optional Features
N/A	N/A

Organism Type	Virus
Temperature Min/Max	18°C (64°F)
Humidity Min/Max	43 % RH
Organism Name	*Phi-X174*
Percent Reduction (60 Minutes)	99.9%

Date / Project Number	Engineer / Reviewer	Pages	Description of Change
1/26/21 G104517635	A. Mastronicolas AM N.Unger NTU	All	• Added test results to the end of the report. • Flipped the second picture around

Completed by:	Amanda Mastronicolas	Reviewed by:	Nicholas Unger
Title:	Microbiology Tech I	Title:	Staff Engineer
Signature:	*Signature on File*	Signature	*Signature on File*
Date	14-JAN-2021	Date:	14-JAN-2021

Annex A Test Results:

Test Parameter		Test Result	Natural Decay Result	Units
Organism	Species	*Coliphage φX174*		---
	ATCC No.	13706-B1		---
	Challenge Concentration	5.0×10^9		PFU/mL
Samples (10min.)	0	TNTC (2628)	TNTC (2628)	PFU
	15	104	TNTC (2628)	PFU
	30	10	TNTC (2628)	PFU
	45	7	TNTC (2628)	PFU
	60	1	TNTC (2628)	PFU
	75	<1	TNTC (2628)	PFU
	90	<1	TNTC (2628)	PFU
	105	<1	TNTC (2628)	PFU
	120	<1	TNTC (2628)	PFU
Results	--	99.9%		Reduction