

Excelitas Canada Inc.

EFFICACY TEST REPORT

SCOPE OF WORK

Non-standardized Test Method: Microbial Reduction Rate Test

PRODUCT – UV light

MODEL – 010-00490R

REPORT NUMBER

104889339COL-001

ISSUE DATE

December 17, 2021

PAGES 5

DOCUMENT CONTROL NUMBER

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

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SECTION 1 EFFICACY STUDY SUMMARY

Client		Excelitas Canada Inc. 22001 Chemin Dumberry Vaudreuil-Dorion, QC J7V 8P7 Canada
Project No.		G104889339
Sample	Product	UV Light
	Model	010-00490R
Procedural	Engineer	Luke Melaragno
	Reviewer	Nicholas Unger
	Dates Tested	12/13/21 – 12/15/21
	Report Date	12/17/21
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 test device was mounted 90.5" from the ceiling floor, mounted to the wall. and a microbial suspension was aspirated into the chamber. Air samples were taken from the test chamber once the unit was turned on and sampling was taken every 10 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).

SECTION 3 ORGANISMS

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

SECTION 4 EQUIPMENT

Equipment Type	Equipment No.	Calibration Due Date
Micropipette	CE 2587	06/30/2022
Incubator	CE 2381	07/07/2022
Balance	CE 1882	07/07/2022
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	09/09/2022
Ambient Temperature/RH	CE 1179	For Reference Only

SECTION 5 MEDIA AND REAGENTS

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

SECTION 6 SAMPLE ACQUISITION

Acquisition method	Shipped to Intertek
Description	UV light
Model Number	010-00490R
Arrival date	12/20/21
Condition	New
Sample Identification No.	COL2112101323-001
Development Level	Production



SECTION 7 SUMMARY OF RESULTS

010-00490R	
Organism Type	Virus
Temperature Min/Max	21°C (70°F)
Humidity Min/Max	27% RH
Organism Name	<i>Phi-X174</i>
Time to Reduction	20 minutes
Percent Reduction	99.9%

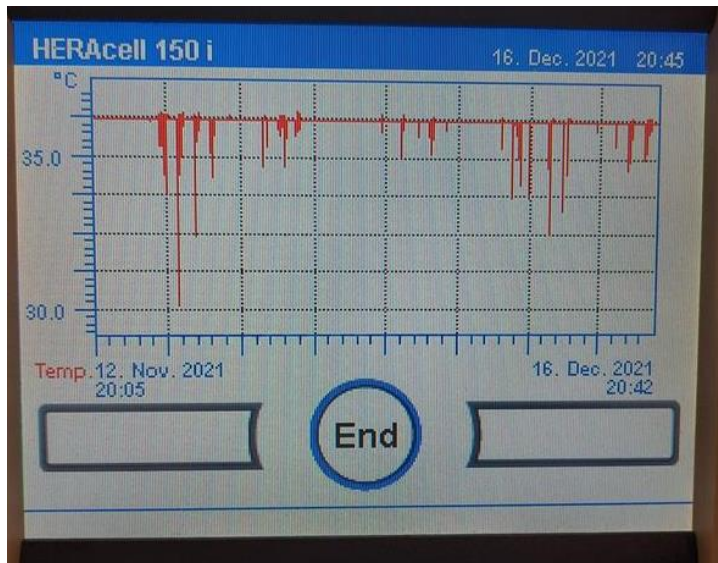
DATE / PROJECT NUMBER	ENGINEER / REVIEWER	PAGES	DESCRIPTION OF CHANGE
1-7-2022 G104889339	N. Unger <i>NU</i> L. Moomaw <i>LMM</i>	2 5	Added mounting location and parameters Added test data table

Completed by:	Luke Melaragno	Reviewed by:	Nicholas Unger
Title:	Microbiology Tech I	Title:	Staff Engineer
Signature:	<u>Signature on File</u>	Signature	<u>Signature on File</u>
Date	<u>17-December-2021</u>	Date:	<u>23-December-2021</u>

Annex A: Test Results

Test Parameter		Test Result	Natural Decay Result	Units
Organism	Species	<i>Coliphage φX174</i>		---
	ATCC No.	13706-B1		---
	Challenge Concentration	1.2 x 10 ¹⁰		PFU/mL
Samples	0	TNTC (2628)	TNTC (2628)	PFU
	10	111	TNTC (2628)	PFU
	20	2	TNTC (2628)	PFU
	30	1	TNTC (2628)	PFU
	40	<1	TNTC (2628)	PFU
	50	<1	TNTC (2628)	PFU
	60	1	TNTC (2628)	PFU
	70	<1	TNTC (2628)	PFU
	80	<1	TNTC (2628)	PFU
	90	1	TNTC (2628)	PFU
	100	<1	TNTC (2628)	PFU
	110	1	TNTC (2628)	PFU
120	<1	TNTC (2628)	PFU	
Results	20 Minutes	99.9%		Reduction

Annex B: Incubation Data



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