

LEAN AIR

CLEAN AIR Sponsor: Marcela Munzarova Nano Medical s.r.o. 5.kvetna 1640/65 Prague, 14000 CZECH REPUBLIC

## Viral Filtration Efficiency (VFE) Final Report

AntiMicrobe Web R CLEAN AIR Test Article:

1272273-S01 Study Number: Study Received Date: 28 Feb 2020

> Nelson Laboratories, LLC Testing Facility:

6280 S. Redwood Rd. Salt Lake City, UT 84123 U.S.A.

Standard Test Protocol (STP) Number: STP0007 Rev 16 EAN AIR Test Procedure(s):

Deviation(s): None

Summary: The VFE test is performed to determine the filtration efficiency of test articles by comparing the viral control counts upstream of the test article to the counts downstream. A suspension of bacteriophage ФX174 was aerosolized using a nebulizer and delivered to the test article at a constant flow rate and fixed air pressure. The challenge delivery was maintained at 1.1 - 3.3 x 103 plaque forming units (PFU) with a mean particle size (MPS) of 3.0 µm ± 0.3 µm. The aerosol droplets were drawn through a six-stage, viable particle, Andersen sampler for collection. The VFE test procedure was adapted from ASTM F2101.

All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

> Test Side: Either

~40 cm<sup>2</sup> Test Area:

28.3 Liters per minute (L/min) VFE Flow Rate:

85 ± 5% relative humidity (RH) and 21 ± 5°C for a minimum of 4 hours Conditioning Parameters:

 $1.3 \times 10^{3} PFU$ Positive Control Average:

Negative Monitor Count: <1 PFU

> MPS: 3.1 µm

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Study Director

James W. Luskin

Study Completion Date

801-290-7500

nelsonlabs.com | sales@nelsonlabs.com

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These results apply to the samples as received and relate only to the test article listed in this report. Reports may not be reproduced except in their entirety. Subject to NL terms and conditions at www.nelsonlabs.com



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## Results:

	Test Article Number	Percent VFE (%)
AN AIR	1	>99.9ª
	2	>99.9ª
	3	>99.9ªCLEAN AIR
	4	EAN AIR >99.9ª
	5 AR	>99.9ª

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The filtration efficiency percentages were calculated using the following equation:

$$\% VFE = \frac{C - T}{C} \times 100$$

C = Positive control average

Plate count total recovered downstream of the test article
Note: The plate count total is available upon request

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<sup>&</sup>lt;sup>a</sup> There were no detected plaques on any of the Andersen sampler plates for this test article. CLEAN AIR