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## Viral Filtration Efficiency (VFE) Final Report

Test Article: Surgical Face Mask

Study Number: 1359788-S01 Study Received Date: 04 Nov 2020

> Testing Facility: Nelson Laboratories, LLC 6280 S. Redwood Rd.

> > Salt Lake City, UT 84123 U.S.A.

mpany Limited (www.a Test Procedure(s): Standard Test Protocol (STP) Number: STP0007 Rev 16

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 10<sup>3</sup> 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. Inside mpany Limited ( www.artbeauty.com.hk ) Art Beauty Group Company Limit

Test Side:

 $\sim 40 \text{ cm}^2$ Test Area:

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

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

S1 PEU pany Limited ( www.artbeauty.com.hk ) Art Beauty Positive Control Average:

Negative Monitor Count:

MPS: 2.7 µm





Sean Shepherd electronically approved for

James Luskin

08 Dec 2020 17:26 (+00:00)

Study Completion Date and Time

801-290-7500

Study Director

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FRT0007-0001 Rev 16

om.hk)Art Beauty Group Company Limited (www.artbeauty.com.hk)Art Beauty Group Company Limited (www.artbea Results:

Results:		
	Test Article Number	Percent VFE (%)
	1	99.5
	2	lited ( www.artbeauty.com.hk ) 99.6 auty Group Company Limitod ( a
	ty.com.hk ) Art Reauty Group Company Lim	98.6
	4	99.5
	5	99.5 99.5 (www.new.pk.) 99.5
		ited ( www.artbeauty.com.hk ) An Beauty Group Company

The filtration efficiency percentages were calculated using the following equation:

$$\% \ VFE = rac{C-T}{C} x \ 100$$
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C = Positive control average

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

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