SHAN HO ASIA PACIFIC LIMITED
1/F., 3 DAI KWAI STREET, TAI PO INDUSTRIAL ESTATE, NEW TERRITORIES, Hong Kong

Job No. : HKHC200400001450

The following sample was submitted and identified by the client as G95

Product Description	:	G95
Quantity Received	:	1 bag
Sample Appearance	:	Blue mask
SGS Sample No.	:	HKHC200400001450-101
Sample Receiving Condition	:	In unopened plastic bag under ambient condition
Country of Origin	:	Hong Kong
Sample Receiving Date	:	Apr 23, 2020
Testing Period	:	Apr 23, 2020 – May 14, 2020

Test Requested

1. To perform Bacterial Filtration Efficiency Test and Differential Pressure Test on the submitted sample.
2. To perform Synthetic blood fluid penetration resistance on the submitted sample.

Test Methods and Test Results
Please refer to the following page(s).

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Signed for and on behalf of
SGS Hong Kong Ltd.

WONG KIN MAN, GILMAN
TECHNICAL DEVELOPMENT MANAGER
- COSMETICS, PERSONAL CARE &
HOUSEHOLD SERVICES

Test Methods and Test Results

1. Bacterial Filtration Efficiency Test

Summary

The BFE test is performed to determine the filtration efficiency of test articles by comparing the bacterial control counts upstream of the test article to the bacterial counts downstream. A suspension of *Staphylococcus aureus* 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 1.7 – 3.0 x 10^3 colony forming units (CFU) with a mean particle size (MPS) of 3.0 ± 0.3 µm. The aerosols were drawn through a six-stage, viable particle, Andersen sampler for collection. This test method complies with ASTM F2101-19 and EN 14683:2019, Annex B.

The Delta P test is performed to determine the breathability of test articles by measuring the differential air pressure on either side of the test article using a manometer, at a constant flow rate. The Delta P test complies with EN 14683:2019, Annex C and ASTM F2100-19.

Test Side	:	White side
BFE Test Area	:	~40 cm^2
BFE Flow Rate	:	28.3 Litres per minute (L/min)
Delta P Flow Rate	:	8 Liters per minute (L/min)
Conditioning Parameters	:	85 ± 5% relative humidity (RH) and 21 ± 5°C for a minimum of 4 hours
Test Article Dimensions	:	~178 mm x ~170 mm
Positive Control Average	:	1.9 x 10^3 CFU
Negative Monitor Count	:	<1 CFU
MPS	:	2.9 µm

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Results:

Test Article Number	Percent BFE (%)
1	98.9
2	98.9
3	99.0
4	99.0
5	99.3

Test Article Number	Delta P (mm H_2O/cm^2)	Delta P (Pa/cm^2)
1	4.7	46.3
2	4.9	47.6
3	5.2	51.1
4	5.3	52.3
5	5.3	51.7

The filtration efficiency percentages were calculated using the following equation:

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

C = Positive control average
T= Plate count total recovered downstream of the test article

Note:

1. Results reported on the submitted sample on an as received basis.
2. The analysis was performed by a SGS assessed competent subcontractor laboratory.

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2. Synthetic blood fluid penetration resistance

Summary:
This procedure was performed to evaluate surgical facemasks and other types of protective clothing materials designed to protect against fluid penetration. The purpose of this procedure is to simulate an arterial spray and evaluate the effectiveness of the test article in protecting the user from possible exposure to blood and other body fluids. The distance from the target area surface to the tip of the cannula is 30.5 cm. A test volume of 2 mL of synthetic blood was employed using the targeting plate method.

This test method was designed to comply with ASTM F1862 and ISO 22609 (as referenced in EN 14683:2019 and AS4381:2015) with the following exception: ISO 22609 requires testing to be performed in an environment with a temperature of 21±5°C and a relative humidity of 85±10%. Instead, testing was performed at ambient conditions within one minute of removal from the environment chamber held at those parameters.

Number of Test articles tested	:	32
Number of Test articles passed	:	31
Test Side	:	Blue side
Pre-conditioning	:	Minimum of 4 hours at 21 ± 5°C and 85 ± 5% relative humidity (RH)
Test Conditions	:	20.4°C and 22% RH

Results: Per ASTM F1862 and ISO 22609, an acceptable quality limit of 4.0% is met for a normal single sampling plan when ≥ 29 of 32 test articles show passing results.

Test Pressure: 160 mmHg (21.3 kPa)

Test Article Number	Synthetic Blood Penetration
1-26,28-32	None Seen
27	Yes

Note:

1. Results reported on the submitted sample on an as received basis.
2. The analysis was performed by a SGS assessed competent subcontractor laboratory.

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Sample Receiving Date : Apr 23, 2020

PHOTO APPENDIX

HKHC200400001450-101

SGS authenticate the photo on original report only

** End of Report ***