

EXCELVATION BIOTECHNOLOGY LIMITED

4B, 4/F CHIAP KING INDUSTRIAL BLDG., 114 KING FUK STREET, SAN PO KONG, KOWLOON, Hong Kong

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description : Reusable Face Mask
(Grey) (Adult Mask)

Application No : 3
Brand : masklab
Sample Color : (A) Grey
Composition : (A) polyester , meltblown
End Use : (A) face mask
Manufacturer : Excelvation Biotechnology
Production Stage : sample only

Proposed Care Instruction : Hand-wash only with water temp not exceeding 30 degree, no soap, do not wring, do not bleach, do not tumble dry, do not dry clean, dry by hanging

Sample Receiving Date : Jun 07, 2021

Testing Period : Jun 08, 2021 - Jul 07, 2021

Test Result(s) : Unless otherwise stated the results shown in this test report refer only to the sample(s) tested, for further details, please refer to the following page(s).

Test Performed : Selected test(s) as requested by applicant

Residual samples returned to applicant

Signed for and on behalf of
SGS (Hong Kong) Limited



Fok Chi Shan, Assistant Technical Manager

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Test Result

Air Permeability

(ISO 9237:1995; Test pressure: 100Pa; Test area: 20cm²)

As Received

	Unit	A	Requirement
-			
Air Permeability Average	l/m ² /s	184.7	-
CV	%	1.3	-

After 5 Washes

	Unit	A	Requirement
-			
Air Permeability Average	l/m ² /s	184.8	-
CV	%	1.3	-

Bacterial filtration efficiency (BFE)

(EN14683:2019+AC:2019 Appendix B)

Sample: Blue fabric mask

As Received

	%	Test Specimen					Requirement
		1	2	3	4	5	
Filtration Efficiency	%	99.9	99.9	99.9	99.9	99.9	≥ 70%

After 5 washes*

	%	Test Specimen					Requirement
		1	2	3	4	5	
Filtration Efficiency	%	99.5	99.0	99.6	99.5	99.3	≥ 70%

*Washing procedure: 5 mins, Hand wash at 30 degree C, line dry

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Bacterial filtration efficiency (BFE)

(ASTM F2101-19)

Sample: Blue fabric mask

<u>As Received</u>		Test Specimen					Requirement
		1	2	3	4	5	
Filtration Efficiency	%	99.9	99.9	99.9	99.9	99.9	≥ 70%
<u>After 5 washes*</u>							
Filtration Efficiency	%	99.5	99.5	99.4	99.2	99.6	≥ 70%

*Washing procedure: 5 mins, Hand wash at 30 degree C, line dry

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Standard Specification for Barrier Face Coverings
(ASTM F3502-21)

Clause 8.1 Sub-Micron Particulate Filtration Efficiency

Test Side : Blue colour
No of Test Specimen Tested : 20 pcs

As received	Filtration Efficiency	%	Test Specimen									
			1	2	3	4	5	6	7	8	9	10
			99	>99	99	99	99	99	>99	>99	99	>99

After 5 washes*	Filtration Efficiency	%	Test Specimen									
			1	2	3	4	5	6	7	8	9	10
			82	83	80	84	80	84	81	84	81	84

Clause 8.2 Air Resistance

Test Side : Blue colour
No of Test Specimen Tested : 20 pcs

As received	Air resistance, inhalation	mm H ₂ O	Test Specimen									
			1	2	3	4	5	6	7	8	9	10
			5	5	5	5	5	6	6	5	5	5

After 5 washes*	Air resistance, inhalation	mm H ₂ O	Test Specimen									
			1	2	3	4	5	6	7	8	9	10
			5	5	5	5	6	5	6	5	5	5

Table 1 Barrier Face Covering Minimum Performance Requirement as reference

Performance Property	Criteria	Test Method Section
Sub-micron particulate filtration efficiency	≥ 20%	8.1
Airflow resistance, inhalation	≤ 15 mmH ₂ O	8.2

Table 2 Separate Classification of Barrier Face Covering Performance Properties as reference

Performance Property	Level 1	Level 2
	(Lower Performance)	(Higher Performance)
Sub-micron particulate filtration efficiency	≥ 20%	≥ 50%
Airflow resistance, inhalation	≤ 15 mmH ₂ O	≤ 5 mmH ₂ O

Remark:

- A total of ten (10) specimens shall be tested. Where barrier face coverings are reusable, an additional set of specimens shall be tested after the maximum number of laundering and cleaning cycles specified by the manufacturer, according to manufacturer care instructions (ten specimens tested in each condition for a total of 20 samples).
- *Washing procedure: 5 mins, Hand wash at 30 degree C, line dry

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Particulates Filtration Efficiency (PFE)

(Modified EN 13274-7:2019; 95 L/min flow rate, particle size of 3 microns)

Sample: Blue fabric mask

<u>As Received</u>		Test Specimen			Requirement
		1	2	3	
Filtration Efficiency	%	>99.9	>99.9	>99.9	≥ 70%
<u>After 5 washes*</u>		Test Specimen			
		1	2	3	
Filtration Efficiency	%	>99.9	>99.9	>99.9	≥ 70%

*Washing procedure: 5 mins, Hand wash at 30 degree C, line dry

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Sample Photo



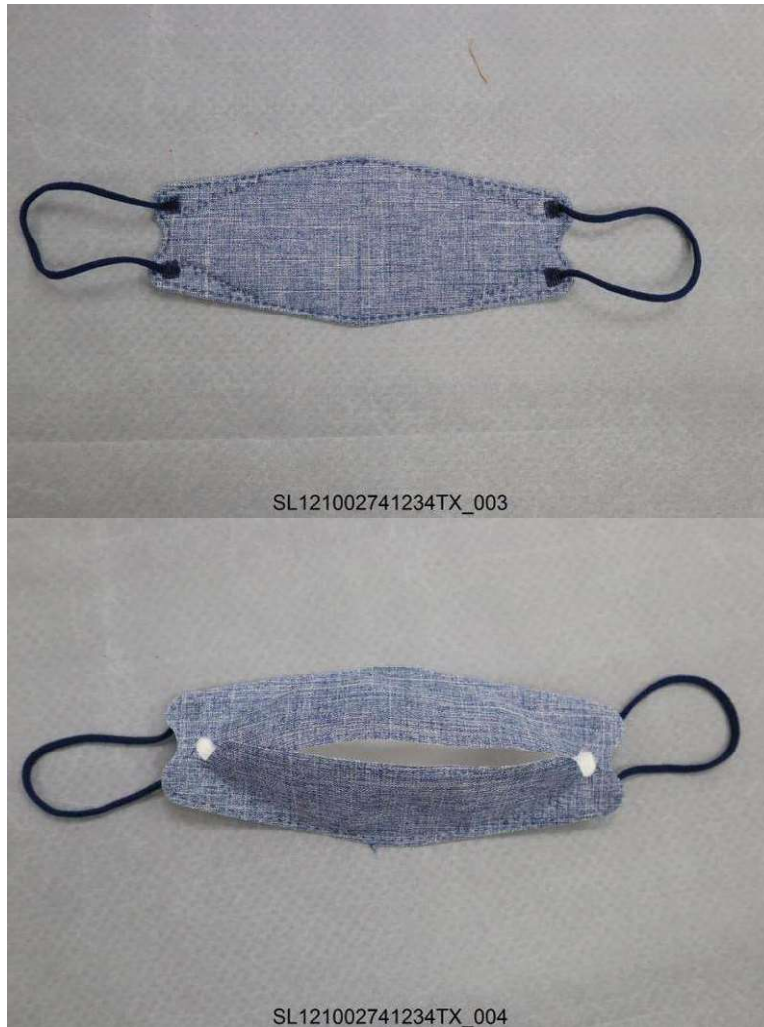
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End of Report

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