



TEST REPORT

Technical Report: (5220)282-0188

November 10, 2020

Date Received: October 8, 2020

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Ms KIM LE - Director
BLUEMOON FASHIONS PTY LTD T/A HAND TO HEART
39 Harvester Ave, North Sunshine, Victoria, 3020.

Sample Description: Sample(s) received is/are stated to be:
Reusable Fabric Face Mask with Intelligent triple layers : - Repelling outer layer: 100% Polyester – Filtering middle layer: 100% Polyester high-level static filtration – Breathable inner layer: T/C fabric antibacterial finish.

Color:	/	Style No(s):	/
Order No.:	/	PO No.:	/
Age Grade:	Adult	Product End Use:	Face Mask
Vendor:	/	Retest No.:	/
Manufacturer:	COMO CO., LTD.	Supplier:	COMO CO., LTD.
Buyer:	/	Country of Origin:	Viet Nam
Test Period:	October 9, 2020 - November 10, 2020	Country of Destination:	Australia
Fiber Content:	/		
Care Instruction:	Hand wash, 40°C, Flat Dry		

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
Client's requirement: EN14683:2019		
Bacterial Filtration Efficiency (BFE) %	DATA	

MD

REMARK

If there are questions or concerns on this report, please contact:

(852) 2331 0330
analytical-enquiry@hk.bureauveritas.com

BUREAU VERITAS HONG KONG LTD.

MS. YANN LO
MANAGER, RS DEPARTMENT

Photo of the Submitted Sample



SAMPLE DESCRIPTION ASSIGNED BY LABORATORY:

ITEM	ITEM DESCRIPTION
1	Black face mask (after 50 washes)



TEST RESULT

Bacterial Filtration Efficiency (BFE) %

Test method

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 $1.7 - 3.0 \times 10^3$ colony forming units (CFU) with a mean particle size (MPS) of $3.0 \pm 0.3 \mu\text{m}$. 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.

Results:

Reference Standards Item : EN 14683-5.2.2 / ASTM 2101

Test Method used : ASTM F 2101

Environmental conditions: ($21 \pm 5 \text{ }^\circ\text{C}$, RH $85 \pm 5 \%$)

strain, medium and reagent information:

Staphylococcus aureus (ATCC 6538)

Solid culture media used – Soybean casein digest agar

Test parameters:

Air flow rate (double way)

57 L/min

Mean particle diameter of bacterial aerosol

($3.0 \pm 0.3 \mu\text{m}$)



TEST RESULT

Bacterial Filtration Efficiency (BFE) %

Determination Of Bacterial Suspension Concentration									
Plate 1 (CFU)		Plate 2 (CFU)		Dilution level			Concentration (CFU/mL)		
51		53		-4			5.2 x 10 ⁵		
Groups		Plate 1	Plate 2	Plate 3	Plate 4	Plate 5	Plate 6	Total	BFE
Negative Control	r	1	0	0	0	0			/
	p	1	0	0	0	0		1	
Positive Control 1	r	14	20	23	71	12	3		/
	p	14	21	24	78	12	3	152	
Positive Control 2	r	17	23	29	84	15	2		/
	p	17	24	30	95	15	2	183	
Sample 1	r	2	3	3	9	2	1		98.81
	p	2	3	3	9	2	1	20	
Sample 2	r	2	3	6	10	2	1		98.57
	p	2	3	6	10	2	1	24	
Sample 3	r	3	4	5	16	2	1		98.15
	p	3	4	5	16	2	1	31	
Sample 4	r	2	5	7	12	4	1		98.15
	p	2	5	7	12	4	1	31	
Sample 5	r	2	4	6	13	1	1		98.39
	p	2	4	6	13	1	1	27	
Average of positive control		1675							

Note:

1. The plate count total is available upon request.
2. Results reported on the submitted sample on an as received basis.
3. The analysis was performed by a BV assessed competent subcontractor laboratory.

END

APPENDIX

		EN 14683:2019		
		Type I	Type II	Type IIR
Barrier Tests	Bacterial Filtration Efficiency (BFE) % ASTM 2101/EN14683	≥95	≥98	
	Particle Filtration Efficiency (PFE)% ASTM F2299	Not required		
	Synthetic Blood Fluid Pressure ASTM F1862/ISO 22609	Not required		≥16.0 (kPa)
Safety Tests	Microbial Cleanliness ISO 11737-1	≤30 (cfu/g)		
	Flammability 16 CFR part 1610	Not required		
Physical Tests	Differential Pressure EN 14683 (Pa/cm ²)	< 40		< 60