

# TEST REPORT

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## BACTERIAL FILTRATION EFFICIENCY (BFE) TEST

**Date Issued** : 17-May-2021  
**Date Sample Received** : 26-Apr-2021  
**Date Sample Analyzed** : 12-May-2021

**Tested For:** Grantech Pte Ltd  
629 Aljunied Road  
Unit 04-17  
Cititech Industrial Building  
Singapore 389838  
**Attention: SY Ong**

**Manufacturer:** Grantech Pte Ltd

**Sample Description:** Granzilla Aircare 3 Ply Disposable Face Mask (Black/White)

**LOT No:** LOT21042021

**Sample :**



**Conditioning** :  
Samples were pre-conditioned to a temperature of  $21 \pm 5^\circ\text{C}$  and relative humidity of  $85 \pm 5\%$  for a minimum of 4 hours.

**Test Method** :  
ASTM F2101 – 19 Standard Test Method for Evaluating the Bacterial Filtration Efficiency (BFE) of Medical Face Mask Materials, Using a Biological Aerosol of *Staphylococcus aureus*.  
BS EN 14683: 2019: Medical face masks – Requirements and test methods

**Area of test specimen tested:** Approximately  $100 \text{ cm}^2$

**Area contacting with the bacterial challenge:** Inner surface of the mask

**Flow rate** : 28.3 L/min

DR WU JIEN  
HOD, MICROBIOLOGY

**BIOLOGICAL & CHEMICAL TECHNOLOGY DIVISION**

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**Results:**

Test sample / Controls	Stage 1, CFU	Stage 2, CFU	Stage 3, CFU	Stage 4, CFU	Stage 5, CFU	Stage 6, CFU	Sum of plate count for each stage, CFU	Average plate count of the controls, CFU	Mean Particle Size <sup>1</sup> (µm) <sup>1</sup>	BFE (%) <sup>2</sup>
Negative Control (Before)	0	0	0	0	0	0	0	0		
Negative Control (After)	0	0	0	0	0	0	0			
Positive Control 1	148	403	942	563	571	60	2687	2354	2.94	
Positive Control 2	155	520	547	524	437	73	2256		3.09	
Positive Control 3	271	374	547	551	432	111	2286		3.13	
Positive Control 4	126	298	482	659	531	40	2136		2.75	
Positive Control 5	144	267	692	772	426	105	2406		2.79	
FB850015947901	2	0	1	3	0	0	6			99.9
FB850015947902	0	0	0	0	0	0	0			100.0
FB850015947903	0	1	1	0	0	4	6			99.7
FB850015947904	0	1	0	0	0	1	2			99.9
FB850015947905	0	0	1	1	0	0	2			99.9

**Remarks:**

The tested results apply only to the samples as received by the laboratory.

<sup>1</sup>Particle size to be in the range of 3.0 µm ± 0.3 µm.

<sup>2</sup>Based on the ASTM F2101 – 19 Standard – Level 1 & BS EN 14683 – Type1, percentage of Bacterial Filtration Efficiency (BFE) must be ≥ 95.



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