



Flinders University Mask Test Report

The following report is prepared for Lam Khang JSC by Flinders University

31 July 2020

Test	Bacterial filtration This testing was performed in accordance with ASTM F2101-14 to measure the efficiency of a medical face mask as a barrier to bacterial penetration		
Test Dates	29 July 2020		
Completed by	K Ross		
Ambient Environment	Temperature: 21 °C Relative Humidity: 50-55 %RH		
Masks tested	Manufacturer:	Lam Khang JSC	
	Mask Type:	Surgical	
	Mask Code/Label:	Nanocare	
Test samples and conditions	<ul style="list-style-type: none"> • 5 masks were randomly selected from those supplied for testing and labelled A-E • Samples were pre-conditioned for 4 hours at 25+/-5°C, 85+/- 5 %RH • Samples were aligned such that the outer side of the mask was exposed to the challenge source • A constant flow rate of 28.3L / min was used for all tests • n=5 Positive controls and n=5 negative controls were performed throughout the duration of testing • Total CFU count used for analysis was the average of all 5 +ve control runs 		

Staphylococcus aureus incubation temperature: 37 °C
 Staphylococcus aureus incubation duration: 12 hours
 Challenge count: 10⁵ cfu/mL
 Plate incubation temperature: 37 °C
 Plate incubation duration: 48 hours

Table 1: Pass requirements for mask type according to AS 4381: 2015

Characteristics	Level 1 barrier	Level 2 barrier	Level 3 barrier	Test method
Bacterial filtration efficiency (BFE), %	≥ 95	≥ 98	≥ 98	ASTM F2101-14 or EN 14683:2014, Appendix B



Results

Positive Control **Mean Total Plate Count:** **2691.18**
Negative Control **Mean Total Plate Count:** **12.40**

Notes: Negative control did not contain staphylococcus

Mask Sample	BFE (%)
A	99.78
B	99.18
C	98.58
D	99.39
E	98.57
A-E	99.30 [98.57 – 99.78]

Final Remarks:

Under the test conditions the Bacterial Filtration Efficiency was $\geq 98\%$ for 5/5 masks.

These masks meet compliance for AS 4381: 2015 Bacterial Efficiency.

Authorised by: _____

Disclaimer:

While the Services have been carried out in a professional and competent manner with due care and skill, Flinders University testing facility is not an accredited facility.