

CIN:U74220DL1998PLC092698

TEST REPORT

Test Report Issued To:

UNOR EXIM PRIVATE LIMITED

403, 4TH FLOOR, KIRTI MAHAL BUILDING, 19,
RAJENDRA PLACE, NEW DELHI, DELHI, INDIA, 110008,

Test Report No: D201016014/D201016014-11

Date of Issue: 26-Oct-2020



Sample Receipt Date: 16-Oct-2020

Date of Start of Testing: 16-Oct-2020

Date of Completion of Test: 21-Oct-2020

Customer Relationship Number

61470

Sample Description :

PRODUCT NAME-UNOMAK- GNL-99 DISPOSABLE FACE MASK ,
MODEL NAME-UNOMAK- GNL-99 , BRAND-UNOMAK ,
FUNCTION-ANTIDUST,ANTI-BACTERIA,ANTI-VIRUS ,
MATERIAL-NON WOVEN CLOTH,FABRIC-1stPLY:25GSM2 PP
SPUNBOND,2nd PLY:25GSM2MELT-BLOWN(FILTER)(NELSON
LAB USA APPROVED),3rd PLY:25GSM2 , PP SPUN- BOND ,
TYPE- EAR LOOP, TIE STRAP , COLOR-BLUE/WHITE , ITEM
SIZE-175*95MM , USAGE-PREVENT FROM BACTERIA AND
VIRUSES,DROPLETS



Customer Reference No

Kind Attention : MS. PRIYANKA GOEL

E-Mail: accounts@unorexim.com

Contact No: 8826450088

Sample Condition : GOOD

Sample Quantity (Approx) : -

Sample Size (Approx) : -

SAMPLE NOT DRAWN BY OUR LABORATORY. THE RESULTS RELATE ONLY TO THE ITEMS TESTED

Report Issued By

ULR-TC549220000018272F

Authenticity of report can be verified by mail at verification@spectrolab.in

This is a Digitally Signed Report and hence doesn't require Physical Signature.

Spectro Analytical Labs Limited, E-41, Okhla Indl. Area, Phase-II, New Delhi- 110020 (India)

Phone :+91-11-40522000, 41611000 || **Web** : www.spectro.in || **Email**:care@spectro.in

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory

Please refer to our Website <http://www.spectro.in/spectro-policies.html> for Terms & Condition

TEST REPORT FOR DETERMINATION OF:

Evaluating the Bacterial Filtration Efficiency (BFE) of Medical Face Mask Materials, Using a Biological Aerosol of Staphylococcus aureus

1. Name of Product

UNOMAK- GNL-99 DISPOSABLE FACE MASK

2. Test Method

IS:16288:2014 : Medical face masks - Requirements and test methods

3. Scope

To perform bacterial filtration efficiency test on surgical mask as per procedure given IS 16288:2014, by using biological aerosol of Staphylococcus aureus.

4. Testing Laboratory

Name: **Spectro Analytical Labs Limited**
Address: E-41, Okhla Phase-2
New Delhi
Pin Code: 110020
Ph: 011-40522000

5. Date of Test

Test Date : 16.10.2020

6.0 Specimen Verification

Fabric: Non-Woven Fabric
GSM: 25gsm²

6.1. Specimen Definition

The testing laboratory was not involved in the selection of the test specimen.

7. Conditioning

Each test specimens were placed for 5 h at a temperature of 21±5 °C and a relative humidity of 85±5 %.

8. Inoculum Size

Staphylococcus aureus ATCC 6538 (5x10⁵ cfu/ml)

9. Medium Used

Tryptic soya agar

10. Temperature condition

37°C



ULR-TC549220000018272F



Rishi Tiwari

Analyst Signature

Testing(TC-5492)

Authorised Signatory

11. Observations, Requirements & Result

Sr. no.	Test Parameters	Result	Limits as per IS 16288:2014	Test Method
1	Bacterial Filtration Efficiency of Specimen (%)	98.2	Level 1= \geq 95 Level 2= \geq 98 Level 3= \geq 98	IS 16288:2014
		98.6		
		98.1		
		98.8		
		98.3		
	Average of BFE results (%)	98.4		
2	Area of test Specimen	Face side	Face side	IS 16288:2014
3	Flow rate of aerosol	28.3	28.3 L/Minute	IS 16288:2014
4	Mean particle size of Challenge aerosol of Staphylococcus aureus, micron	3.0	3 \pm 0.3	IS 16288:2014
5	Average Plate count of Positive control of Staphylococcus aureus in count, per test	2286	1700-3000	IS 16288:2014
6	Average Plate count of Negative control	Negative	Negative	IS 16288:2014

Remarks: The sample showed average 98.4 % Bacterial filtration efficiency against Staphylococcus aureus ATCC 6538 according to IS 16288:2014 test method.

Rishi Tiwari
Analyst Signature



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Testing(TC-5492)

Authorised Signatory

TEST REPORT FOR DETERMINATION OF BREATHABILITY (DIFFERENTIAL PRESSURE)

1. Name of Product

UNOMAK- GNL-99 DISPOSABLE FACE MASK

2. Test Method

IS:16289:2014 Annex.-C : Medical face masks - Requirements and test methods

3. Scope

To determine the breathing resistance or Breathability of medical face mask as per Annex. C given in IS:16289: 2014; Medical face mask - Requirements and test method.

4. Testing Laboratory

Name: Spectro Analytical Labs Limited

Address: E-41, Okhla phase-2

New Delhi-110020

5. Date of Test

Test Date - 19.10.2020

6.0 Specimen Verification

Fabric: Non-Woven Fabric

GSM: 25gsm2

6.1. Specimen Definition

The testing laboratory was not involved in the selection of the test specimen.

7. Conditioning

Each test specimen was placed for 5 Hours at a temperature of 23 °C and a relative humidity of 80 %.

Analyst Signature



Testing(TC-5492)

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Authorised Signatory

8. Observations, Requirements & Test Result:

1. Pre test parameters

Sr. No.	Parameter		Test Method
1	Flow rate	8 Lit/min	IS:16289:2014
2	Specimen area	4.9 cm ²	IS:16289:2014

Sr. No.	Specimen	Pressure (Pa)	Area (cm ²)	Differential Pressure (Pa/cm ²)	Average (Pa/cm ²)
1	A	230	4.9	46.94	47.80
2	B	235	4.9	47.96	
3	C	227	4.9	46.33	
4	D	242	4.9	49.39	
5	E	237	4.9	48.37	

2. Requirement of Material

Sr. No.	Type of medical mask	Differential Pressure (Pa/cm ²)
1	Class 1	Less than 29.4
2	Class 2	Less than 29.4
3	Class 3	Less than 49.0

3. Test Result : 47.80 Pa/cm²

4. Conclusion : Pass in class 3



Analyst Signature



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TEST REPORT FOR DETERMINATION OF:

The Resistance against penetration by synthetic blood (Fixed Volume, Horizontally projected)

1.0 Name of Product

UNOMAK- GNL-99 DISPOSABLE FACE MASK

2.0 Test Method

IS:16289:2014; Standard Specification for Performance of Materials Used in Medical Face Masks

IS:16289:2014 Annex.-D; Standard Test Method for Resistance of Medical Face Masks to Penetration by Synthetic Blood (Horizontal Projection of Fixed Volume at a Known Velocity)

3.0 Scope

IS:16289:2014; Standard Test Method for Resistance of Medical Face Masks to Penetration by Synthetic Blood (Horizontal Projection of Fixed Volume at a Known Velocity)

4.0 Testing Laboratory

Name: **Spectro Analytical Labs Limited**
Address: E-41, Okhla phase-2
New Delhi-110020

5. Date of Test

Test Date – 19-10-2020

6.0 Specimen Verification

Fabric: Non-Woven Fabric
GSM: 25gsm²

6.1. Specimen Definition

The testing laboratory was not involved in the selection of the test specimen.

6.0 Specimen Verification

Fabric: Non-Woven Fabric
GSM: 25gsm²

7. Conditioning

Each test specimens were placed for 6 h at a temperature of 27 °C and a relative humidity of 65 %.

Analyst Signature



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8. Observations & Test Result

- 1. Selected Blood Pressure : 120 mm Hg
- 2. Volume : 2 ml
- 3. Target Area : Centre of mask
- 4. Test Condition : Temperature 27 °C and Relative Humidity 65 %.
- 5. **Result** : **Pass in class 3**

Table 1. Summary of Individual specimen

Specimen Number	Result
1	Pass
2	Pass
3	Pass
4	Pass
5	Pass

Analyst Signature



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Photographs



Before Test



Exposed Side Face



Unexposed Side Face

-- End of Test Report --



Analyst Signature



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