

Test Report

Number: GZHT02338873

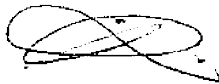
Report Ref:	GZHT02338873		
Date Received:	Sep 15, 2020	Date Issued:	Sep 23, 2020

Company Name:	A2Z WHOLESALE INC.		
Address:	4105 MATTE, SUITE B, BROSSARD QUEBEC, J4Y 2P4 CANADA		
Contact Name:	陈小姐		

The Following Sample Was Submitted And Identified By/On Behalf Of The Applicant As:	
End Uses	: Face Mask
Ratings	: Level 1
Sample Name	: 3ply Disposable Mask
No. Of Sample	: One(100 pieces)
Size	: 17.5*9.5cm
Colour	: Blue
Standard	: ASTM F2100-19 ^{E1}
Manufacturer	:
Date received/ Test Started	: Sep 15, 2020

Test was conducted on specific items, at our client's request.

Prepared And Checked By:
For Intertek Testing Services Shenzhen Ltd. Guangzhou Branch



Lin Lin
General Manager



qin / pennytao

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

深圳天祥质量技术服务有限公司广州分公司

Room 02, 1-8/F & Room 01, E101/E201/E301/E401/E501/E601/E701/E801, Hengyun Building, 235 Kaifa Ave., Guangzhou
No.7-2, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China Economic & Technological Development District, Guangzhou, China
中国广州经济技术开发区科学城彩频路7号之二第1-8层02房01房 中国广州经济技术开发区开发大道235号恒运大厦3楼
101.
E201、E301、E401、E501、E601、E701、E801 Tel: +86 20 8396 6868 Fax: +86 20 8222 8169 Postcode: 510730
Tel: +86 20 8213 9001 Fax: +86 20 8208 9909 Postcode: 510663



Original Sample Photo



Prepared And Checked By:
For Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

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General Manager



qin / pennytao

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中国广州经济技术开发区科学城彩频路7号之二第1-8层02房01房

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Tel: +86 20 8213 9001 Fax: +86 20 8208 9909 Postcode: 510663



Hengyun Building, 235 Kaifa Ave., Guangzhou
Economic & Technological Development District, Guangzhou, China

中国广州经济技术开发区开发大道235号恒运大厦3楼
Tel: +86 20 8396 6868 Fax: +86 20 8222 8169 Postcode: 510730

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Summary of testing:

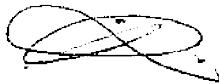
With reference to following standard:

- ASTM F2100-19^{E1} Standard Specification for Performance of Materials Used in Medical Face Masks Level 1

Materials Used in The Submitted Sample Were Found To **NOT** Comply With The Level 1 Requirements of ASTM F2100-19^{E1} with respect to Differential Pressure test.

Materials Used in The Submitted Sample Were Found To Comply With The Level 1 Requirements of ASTM F2100-19^{E1} with respect to Bacterial Filtration Efficiency (BFE), Sub-Micron Particulate Filtration, Resistance to Penetration by Synthetic Blood and Flammability Tests.

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Lin Lin
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No.7-2, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China

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101、

E201、E301、E401、E501、E601、E701、E801

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Hengyun Building, 235 Kaifa Ave., Guangzhou

Economic & Technological Development District, Guangzhou, China

中国广州经济技术开发区开发大道235号恒运大厦3楼

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Tests Conducted (As Requested By The Applicant)

- 1 Differential Pressure (ASTM F2100-19^{e1}, Section 9.2, Testing Refer to EN 14683:2019+AC:2019 Annex C):
Air flow: 8L/min, Test Area Diameter 25 mm, Test Area: 4.9 cm².

Tested Sample	Result (mm H ₂ O/cm ²)*					Performance Requirement for Medical Face Mask (mm H ₂ O/cm ²)
	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	
Location 1	5.2	5.3	5.3	5.0	5.4	Level 1 < 5.0
Location 2	6.2	5.4	5.7	4.7	6.7	
Location 3	5.0	5.9	5.3	5.8	6.0	
Location 4	5.3	6.4	5.3	5.4	5.5	
Location 5	5.1	5.6	4.6	4.9	5.7	
Average	5.4	5.7	5.2	5.2	5.9	

* = All the locations were evenly taken from the main mask body.

- 2 Resistance to Penetration by Synthetic Blood (ASTM F2100-19^{e1}, Section 9.4, Testing Refer to ASTM F1862/F1862M-17, Test Pressure: 80 mmHg, Velocity: 450 cm/s):
Condition test specimens for a minimum of 4 hours in an environment of temperature (21±5) °C and relative humidity (85±5)% and conduct the test within 1 minute of removal from conditioning chamber.
Test Environment Condition: Temperature 25.0°C, Relative Humidity 84.0%

Tested Sample	Observation	Pass/Fail	Performance Requirement for Medical Face Mask
Specimen (1)	No Penetration	Pass	Level 1: No Penetration at 80 mm Hg
Specimen (2)	No Penetration	Pass	
Specimen (3)	No Penetration	Pass	
Specimen (4)	No Penetration	Pass	
Specimen (5)	No Penetration	Pass	
Specimen (6)	No Penetration	Pass	
Specimen (7)	No Penetration	Pass	
Specimen (8)	No Penetration	Pass	
Specimen (9)	No Penetration	Pass	
Specimen (10)	No Penetration	Pass	
Specimen (11)	No Penetration	Pass	

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101、
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Specimen (12)	No Penetration	Pass
Specimen (13)	No Penetration	Pass
Specimen (14)	No Penetration	Pass
Specimen (15)	No Penetration	Pass
Specimen (16)	No Penetration	Pass
Specimen (17)	No Penetration	Pass
Specimen (18)	No Penetration	Pass
Specimen (19)	No Penetration	Pass
Specimen (20)	No Penetration	Pass
Specimen (21)	No Penetration	Pass
Specimen (22)	No Penetration	Pass
Specimen (23)	No Penetration	Pass
Specimen (24)	No Penetration	Pass
Specimen (25)	No Penetration	Pass
Specimen (26)	No Penetration	Pass
Specimen (27)	No Penetration	Pass
Specimen (28)	No Penetration	Pass
Specimen (29)	No Penetration	Pass
Specimen (30)	No Penetration	Pass
Specimen (31)	No Penetration	Pass
Specimen (32)	No Penetration	Pass

Conclusion*: **Accepted**

* = An acceptable quality limit of 4.0% is met for a single sampling plan when 29 or more of the 32 tested specimens show "pass" results.

3 Sub-Micron Particulate Filtration (ASTM F2100-19^{e1}, Section 9.3, Testing Refer to ASTM F2299/F2299M-17):

Particle size in aerosol: 0.1 µm, Aerosol: Polystyrene Latex Spheres (PSL), Test area: 100 cm², Airflow: 5.33 cm/s, Sampling time: 1 min.

Laboratory Condition: Temperature 21.0°C, Relative Humidity 47.0%

<u>Tested Sample/Component</u>	<u>Result (%)</u>	<u>Performance Requirement for Medical Face Mask (%)</u>
Specimen (1)	97.7	Level 1: ≥ 95
Specimen (2)	96.9	
Specimen (3)	96.9	
Specimen (4)	97.7	
Specimen (5)	97.5	

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 中国广州经济技术开发区科学城彩频路7号之二第1-8层02房01房 中国广州经济技术开发区开发大道235号恒运大厦3楼
 101、 Tel: +86 20 8396 6868 Fax: +86 20 8222 8169 Postcode: 510730
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Tests Conducted (As Requested By The Applicant)

4 Flammability Test (ASTM F2100-19^{e1}, Section 9.5, Testing Refer to 16 CFR Part 1610 (As Amendment In 2008)):

X	Plain Surface		Raised Surface
Burn Direction : <input checked="" type="checkbox"/> Length <input type="checkbox"/> Width			Requirement Class 1
Prelim Plain Surface :			
Length: DNI			
Width: DNI			
Original* (seconds)			
1.	DNI		
2.	DNI		
3.	DNI		
4.	DNI		
5.	DNI		
6.	-		
7.	-		
8.	-		
9.	-		
10.	-		
Average : -			

Classification :	<input checked="" type="checkbox"/>	Class 1, Normal Flammability
	<input type="checkbox"/>	Class 2, Intermediate Flammability, Raised Surface
	<input type="checkbox"/>	Class 3, Rapid And Intense Burning

Explanation Of Flammability Results:	
DNI	Did not ignite.

* The disposable fabrics and garments need not to be refurbished in accordance with 16 CFR Part 1610.35 (a)(2).

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5 Bacterial Filtration Efficiency (BFE)

As per ASTM F2100-19^{e1} Standard Specification for Performance of Materials Used in Medical Face Masks Section 9.1 and 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.

Test Item	Results (%)					Performance Requirement for Medical Face Mask (%)
	Specimen (1)	Specimen (2)	Specimen (3)	Specimen (4)	Specimen (5)	
Bacterial Filtration Efficiency (BFE)	>99.9	99.8	99.9	99.9	>99.9	Level 1: ≥ 95

Remarks:

1. Biological Aerosol: *Staphylococcus aureus* (ATCC 6538).
2. Testing side: Inside of the test specimen was facing towards the challenge aerosol.
3. Test area: 78 cm²
4. Flow rate: 28.3 L/min
5. The average plate count results of the positive controls: 1.8×10³ CFU
6. The average plate count results of the negative controls: < 1 CFU
7. CFU = Colony Forming Unit

This item was conducted in Caipin Road, Guangzhou Science City, GETDD, Guangzhou, Guangdong.

End of Report

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