

DYLOR



Disposable Protective Mask

ASTM F2100-19 Level 1

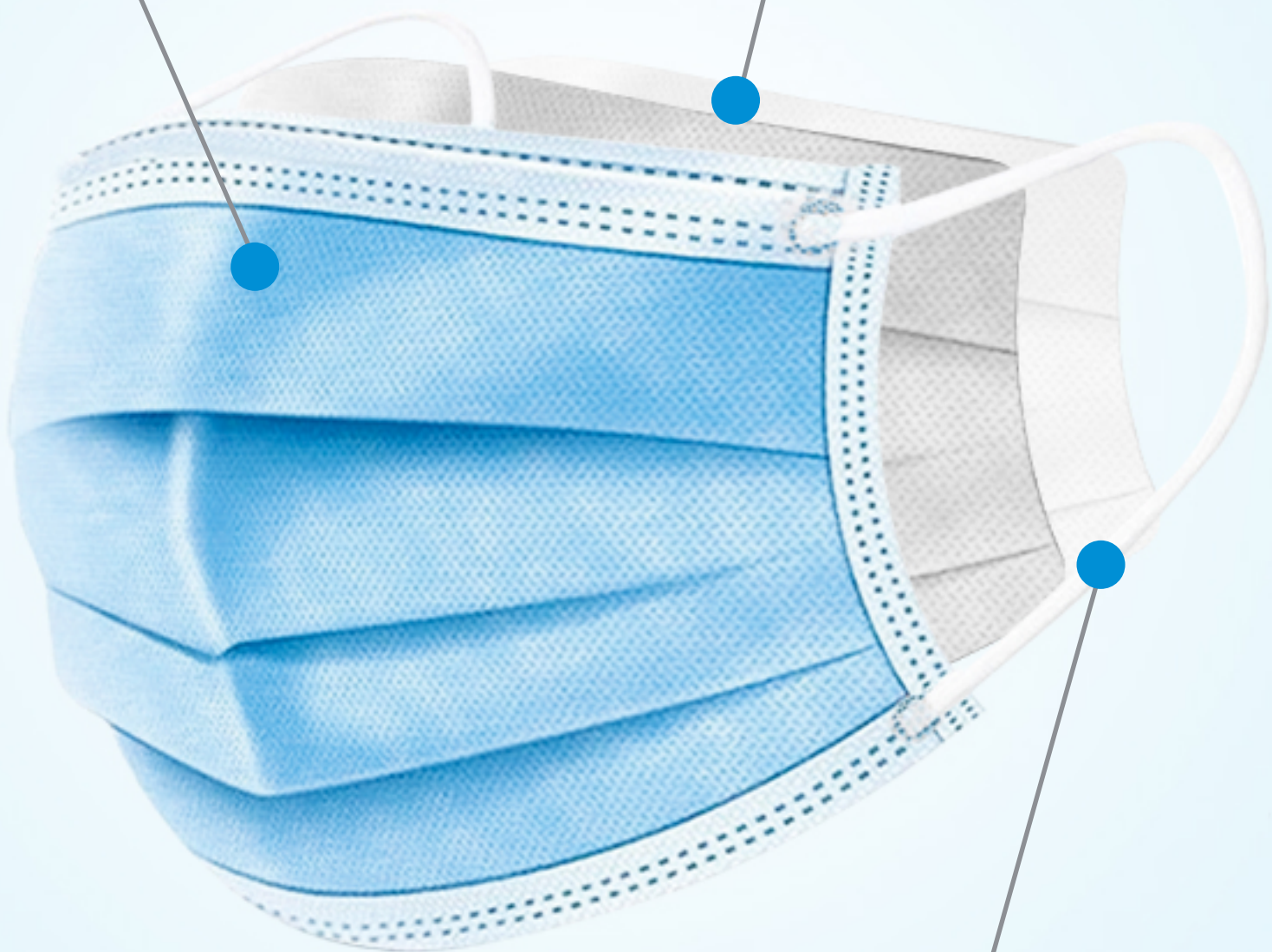
MAKE YOUR BREATH MORE COMFORTABLE

3M Certified Material Supplier
Nelson Lab approved ASTM test report

Three layer filtration

Specialty High Fluid Resistance Outer-Layer
for Blood Penetration Protection

High BFE/PFE
Melt-blown Filtration Layer



Flat Earloop,
More Comfortable for Longer time usage

MAKE YOUR BREATH MORE COMFORTABLE

DYLOR ASTM Level 1

Blue Mask w. Earloop



>95%

Bacterial
Filtration
Efficiency

>95%

Submicron
Particle
Filtration
Efficiency

<60

Differential
Pressure

80mmHg Pass

Fluid Resistance
(Splash Resistance Pressure)

Class 1

Flammability 16 CFR
part 1610

Manufacturer Information

Zhejiang Dylor New Material Co., Ltd.
is a specially designated material supplier
for personal care products of **3M** in China.



Test Reports

ASTM Level 1 reports by Nelson Lab.



Sponsor:
Yingkai Tang
Zhejiang Dylor New Materials Co.,Ltd
No. 153 Guang'An Road
Tongxiang, Zhejiang Province,
CHINA

Bacterial Filtration Efficiency (BFE) and Differential Pressure (Delta P) Final Report

Test Article: Disposable Protective Mask, DM20200101, Non-woven fabric 65%,
Melt-blown fabric 35%, Batch number202005
Purchase Order: 20-577A
Study Number: 1306401-S01
Study Received Date: 03 Jun 2020
Testing Facility: Nelson Laboratories, LLC
6280 S. Redwood Rd.
Salt Lake City, UT 84123 U.S.A.
Test Procedure(s): Standard Test Protocol (STP) Number: STP0004 Rev 18
Deviation(s): None

Summary: 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.

The Delta P test is performed to determine the breathability of test articles by measuring the differential air pressure on either side of the test article using a manometer, at a constant flow rate. The Delta P test complies with EN 14683:2019, Annex C and ASTM F2100-19.

All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Test Side: Inside
BFE Test Area: $\sim 40 \text{ cm}^2$
BFE Flow Rate: 28.3 Liters per minute (L/min)
Delta P Flow Rate: 8 L/min
Conditioning Parameters: $85 \pm 5\%$ relative humidity (RH) and $21 \pm 5^\circ\text{C}$ for a minimum of 4 hours
Test Article Dimensions: $\sim 172 \text{ mm} \times \sim 155 \text{ mm}$
Positive Control Average: $2.8 \times 10^3 \text{ CFU}$
Negative Monitor Count: $< 1 \text{ CFU}$
MPS: $2.8 \mu\text{m}$



James Luskin electronically approved
Study Director

James Luskin

09 Jul 2020 14:52 (+00:00)
Study Completion Date and Time



Study Number 1306401-S01
Bacterial Filtration Efficiency (BFE)
and Differential Pressure (Delta P) Final Report

Results:

Test Article Number	Percent BFE (%)
1	97.4
2	98.1
3	98.7
4	99.5
5	99.8

Test Article Number	Delta P (mm H ₂ O/cm ²)	Delta P (Pa/cm ²)
1	3.9	37.9
2	3.8	37.3
3	3.9	37.8
4	3.8	37.3
5	3.8	37.7

The filtration efficiency percentages were calculated using the following equation:

$$\% \text{ BFE} = \frac{C - T}{C} \times 100$$

C = Positive control average
T = Plate count total recovered downstream of the test article
Note: The plate count total is available upon request

Test Reports

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Sponsor:
Yingkai Tang
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Tongxiang, Zhejiang Province,
CHINA

Synthetic Blood Penetration Resistance Final Report

Test Article: Disposable Protective Mask, DM20200101, Non-woven fabric 65%, Melt-blown fabric 35%, Batch number202005
 Purchase Order: 20-577A
 Study Number: 1306405-S01
 Study Received Date: 03 Jun 2020
 Testing Facility: Nelson Laboratories, LLC
 6280 S. Redwood Rd.
 Salt Lake City, UT 84123 U.S.A.
 Test Procedure(s): Standard Test Protocol (STP) Number: STP0012 Rev 09
 Deviation(s): None

Summary: This procedure was performed to evaluate surgical facemasks and other types of protective clothing materials designed to protect against fluid penetration. The purpose of this procedure is to simulate an arterial spray and evaluate the effectiveness of the test article in protecting the user from possible exposure to blood and other body fluids. The distance from the target area surface to the tip of the cannula is 30.5 cm. A test volume of 2 mL of synthetic blood was employed using the targeting plate method.

This test method was designed to comply with ASTM F1862 and ISO 22609 (as referenced in EN 14683:2019 and AS4381:2015) with the following exception: ISO 22609 requires testing to be performed in an environment with a temperature of 21 ± 5°C and a relative humidity of 85 ± 10%. Instead, testing was performed at ambient conditions within one minute of removal from the environmental chamber held at those parameters.

All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Number of Test Articles Tested: 32
 Number of Test Articles Passed: 32
 Test Side: Outside
 Pre-Conditioning: Minimum of 4 hours at 21 ± 5°C and 85 ± 5% relative humidity (RH)
 Test Conditions: 23.4°C and 22% RH



Brent Shelley electronically approved for
Study Director

James Luskin

19 Jun 2020 17:14 (+00:00)
Study Completion Date and Time



Study Number 1306405-S01
Synthetic Blood Penetration Resistance Final Report

Results: Per ASTM F1862 and ISO 22609, an acceptable quality limit of 4.0% is met for a normal single sampling plan when ≥29 of 32 test articles show passing results.

Test Pressure: 80 mmHg (10.7 kPa)

Test Article Number	Synthetic Blood Penetration
1-32	None Seen

Test Reports

ASTM Level 1 reports by Nelson Lab.



Sponsor:
Yingkai Tang
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No 153 Guang'An Rd.
Tongxiang, Zhejiang,
CHINA

Latex Particle Challenge Final Report

Test Article: Disposable Protective Mask, DM20200101, Non-woven fabric 65% Melt-blown fabric 35%, Batch #202005
 Purchase Order: 20-577A
 Study Number: 1306403-S01
 Study Received Date: 03 Jun 2020
 Testing Facility: Nelson Laboratories, LLC
 6280 S. Redwood Rd.
 Salt Lake City, UT 84123 U.S.A.
 Test Procedure(s): Standard Test Protocol (STP) Number: STP0005 Rev 07
 Deviation(s): Quality Event (QE) Number(s): QE22125

Summary: This procedure was performed to evaluate the non-viable particle filtration efficiency (PFE) of the test article. Monodispersed polystyrene latex spheres (PSL) were nebulized (atomized), dried, and passed through the test article. The particles that passed through the test article were enumerated using a laser particle counter.

A one-minute count was performed, with the test article in the system. A one-minute control count was performed, without a test article in the system, before and after each test article and the counts were averaged. Control counts were performed to determine the average number of particles delivered to the test article. The filtration efficiency was calculated using the number of particles penetrating the test article compared to the average of the control values.

The procedure employed the basic particle filtration method described in ASTM F2299, with some exceptions; notably the procedure incorporated a non-neutralized challenge. In real use, particles carry a charge, thus this challenge represents a more natural state. The non-neutralized aerosol is also specified in the FDA guidance document on surgical face masks. All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Test Side: Inside
 Area Tested: 91.5 cm²
 Particle Size: 0.1 µm
 Laboratory Conditions: 21°C, 31% relative humidity (RH) at 8:42 AM; 21°C, 31% RH at 9:50 AM
 Average Filtration Efficiency: 97.5%
 Standard Deviation: 0.15



McKenna Wild electronically approved for
 Study Director

Curtis Gerow

23 Jul 2020 18:40 (+00:00)
 Study Completion Date and Time



Study Number 1306403-S01
 Latex Particle Challenge Final Report

Deviation Details: Controls and sample counts were conducted for one minute instead of an average of three one minute counts. This change shortens the total test time for each sample but will still provide an accurate determination of the particle counts. An equilibrate is a dwell period where the challenge is being applied to the test article for a certain period of time before test article counts are counted. The equilibrate period was reduced from 2 minutes to a minimum of 30 seconds which is sufficient time to clear the system of any residual particles, and establish a state of stable equilibrium before sample counts are taken. Test method acceptance criteria were met, results are valid.

Results:

Test Article Number	Test Article Counts	Average Control Counts	Filtration Efficiency (%)
1	301	12,535	97.6
2	307	12,876	97.6
3	360	13,233	97.3
4	348	13,150	97.4
5	339	13,500	97.5

Test Reports

ASTM Level 1 reports by Nelson Lab.



Sponsor:
Yingkai Tang
Zhejiang Dylor New Materials Co. Ltd.
No 153 Guang'An Rd.
Tongxiang, Zhejiang,
CHINA

Flammability of Clothing Textiles Final Report

Test Article: Disposable Protective Mask, DM20200101, Non-woven fabric 65% Melt-blown fabric 35%, Batch #202005
 Purchase Order: 20-577A
 Study Number: 1306404-S01
 Study Received Date: 03 Jun 2020
 Testing Facility: Nelson Laboratories, LLC
 6280 S. Redwood Rd.
 Salt Lake City, UT 84123 U.S.A.
 Test Procedure(s): Standard Test Protocol (STP) Number: STP0073 Rev 06
 Deviation(s): None

Summary: This procedure was performed to evaluate the flammability of plain surface clothing textiles by measuring the ease of ignition and the speed of flame spread. The parameter of time is used to separate materials into different classes, thereby assisting in a judgment of fabric suitability for clothing and protective clothing material. The test procedure was performed in accordance with the test method outlined in 16 CFR Part 1610 (a) *Step 1 - testing in the original state*. *Step 2 - Refurbishing and testing after refurbishing*, was not performed. All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Test Article Side Tested: Outside Surface
 Orientation: Machine

Test Criteria for Specimen Classification (See 16 CFR Part 1610.7):

Class	Plain Surface Textile Fabric
1	Burn time ≥3.5 seconds
2	Not applicable to plain surface textile fabrics
3	Burn time <3.5 seconds

The 16 CFR Part 1610 standard specifies that 10 replicates are to be tested if, during preliminary testing, only 1 test article exhibits flame spread and it is less than 3.5 seconds or the test articles exhibit an average flame spread less than 3.5 seconds. Five replicates are to be tested if no flame spread is observed upon preliminary testing, if only 1 test article exhibits flame spread and it is equal to or greater than 3.5 seconds, or if the average flame spread is equal to or greater than 3.5 seconds. In accordance with the standard, 5 replicates were tested for this study.



Sean Shepherd electronically approved for
 Study Director

Curtis Gerow

06 Jul 2020 20:48 (+00:00)
 Study Completion Date and Time



Study Number 1306404-S01
 Flammability of Clothing Textiles Final Report

Results:

Replicate Number	Time of Flame Spread
1	DNI
2	DNI
3	DNI
4	DNI
5	DNI

DNI = Test Article did not ignite

Packaging & Shipping Size

50 pcs / box

40 boxes / Ctn

Ctn Size: 57×38.5×37 CM

30 Ctns / Pallet (Can be changed upon request)

Pallet Size: 42×48×93 IN.

Pallet Weight: Approx. 800 lbs.

1 Pallet = 30 Ctns = 1200 boxes = 60000 pcs



Sample Pallet Ex.