



REPORT NO: 2847



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## REPORT

On the testing of

Medical Face Masks to EN14683:2019+AC:2019  
Documented in house methods:  
M0121, M0122, M0124, M0125

Supplied by:



Report Prepared by:

Anthony Hanson



## Identification

Mask Description: Blue three ply foldable with ear loops and clear plastic mouth area.  
 Mask size: 17.5 by 9.5cm  
 Manufacturer: Anhui Rongda Medical Equipment Co Ltd  
 Batch number: Not specified  
 4ward Sample No: 2847  
 Customer reference: email TAD/PS 110221  
 Date received: 04/03/2021

## Test Summary

	M1	M2	M3	M4	M5	Threshold	Result
Bacterial filtration efficiency (BFE), [%] 5.2.2	99.99	99.99	99.99	99.99	99.99	$\geq 98$	Pass
Breathability 5.2.3 (differential pressure) average of 5 areas/mask [Pa/cm <sup>2</sup> ]	27.26	26.07	29.51	26.53	26.68	< 60	Pass
Splash resistance pressure 5.2.4 [kPa]	30 of 32 masks passed at 16kPa					$\geq 29$ @16kPa	Pass

Threshold for type IIR mask

## Test Details

The Face Masks were tested as received from the customer

Testing of the Medical Face Masks was carried out to the following sections of EN 14683:2019+ AC:2019

### Bacterial Filtration Efficiency Section 5.2.2

Test area: 49 cm<sup>2</sup>  
 Exposed face: Inside  
 Test flow rate: 28.3L/min  
 Sample size: Full mask expanded (> 10x10cm)  
 Mean plate counts  
 Positive controls: 3475 cfu  
 Negative control: 0 cfu

Sample pre-conditioning: > 4h @ 21±5°C 85±5%RH

BFE for each test specimen shown in summary table.

Pass - The measured values were observed in tolerance at the points tested. The specific false accept risk < 5%.

## Breathability Section 5.2.3

Test area:  $4.9 \pm 0.4 \text{ cm}^2$   
 Test quantity: 5 masks  
 Test positions: 1 centre, 4 spanning out from the centre  
 Test flow rate: 8L/min  
 Sample pre-conditioning: >4h @  $21 \pm 5^\circ\text{C}$   $85 \pm 5\% \text{RH}$

		Mask1	Mask2	Mask3	Mask4	Mask5
Differential pressure [Pa/cm <sup>2</sup> ]	1	28.86	26.76	27.91	26.38	28.10
	2	24.46	20.26	32.49	23.89	23.51
	3	28.29	28.86	32.49	20.83	27.52
	4	28.86	26.76	25.42	30.58	26.57
	5	25.80	27.71	29.24	30.96	27.71
	Average	27.26	26.07	29.51	26.53	26.68

Pass - The measured values were observed in tolerance at the points tested. The specific false accept risk < 5%.

## Splash Resistance Section 5.2.4

The test was carried out in accordance with ISO 22609:2004

Centre of mask targeted

Conditioned for > 4h at  $21 \pm 5^\circ\text{C}$   $85 \pm 5\% \text{RH}$

Tested at  $21 \pm 5^\circ\text{C}$   $85 \pm 10\% \text{RH}$

No targeting plate was used

32 masks tested

30 masks Passed

Minimum of 29 Passes required

Pass - The Test passed the requirement AND had a conformance probability,  $pc > 95\%$  for test conditions (Conditioning and test temperature and RH, synthetic blood surface tension and spray velocity)

Date of testing: 05 - 15/03/2021

These results relate only to the samples tested

Work carried out and recorded by the following personnel:

**Tessa Peters BSc**  
Laboratory Technician

Work approved by the following personnel:

**Anthony Hanson**  
Quality Assurance Engineer

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