

## Test Report

Date: 18 Sep 2020

Sample Name: 9H FULL COVER FILM(BIOMASTER AT300)

Sample Batch No.: EH-CL-9H-AT300

Production Date: 2020.9.9

Above information and sample(s) was/were submitted and certified by the client, SGS quoted the information with no responsibility as to the accuracy, adequacy and/or completeness.

SGS Reference No. : /  
 Date of Sample Received : 10 Sep 2020  
 Testing Period : 10 Sep 2020 - 18 Sep 2020  
 Test Requested : Selected test(s) as requested by client.  
 Test Method : Please refer to next page(s).  
 Test Result(s) : Please refer to next page(s).

This test report has been drafted in English and maybe translated into other languages, The English version shall prevail.

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SGS Authorized Signature

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Page 1 of 3



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SGS-CSTC Standards Technical Services Co., Ltd.  
 Guangzhou Branch Testing Laboratory and Food Laboratory

Date: 18 Sep 2020

**Sample Description :**

**Specimen No.** 1      **SGS Sample ID**      **Description**  
Sheet sample

**Test Result(s) :**

**Test Requested :** Test of antimicrobial activity

**Test Method :** ISO 22196:2011 Measurement of antibacterial activity on plastics and other non-porous surfaces

| Test organism                        | Escherichia coli<br>ATCC 8739 | Staphylococcus aureus ATCC<br>6538P |
|--------------------------------------|-------------------------------|-------------------------------------|
| Concentration of bacteria (cells/mL) | 5.4x10 <sup>5</sup>           | 5.6x10 <sup>5</sup>                 |
| Volume of test inoculum (mL)         | 0.2                           | 0.2                                 |
| U <sub>0</sub>                       | 3.83                          | 3.84                                |
| U <sub>t</sub>                       | 5.52                          | 5.81                                |
| A <sub>t</sub>                       | 1.34                          | -0.20                               |
| B (cells/cm <sup>2</sup> )           | 3.3x10 <sup>5</sup>           | 6.4x10 <sup>5</sup>                 |
| C (cells/cm <sup>2</sup> )           | 2.2x10 <sup>4</sup>           | 0.63                                |
| R                                    | 4.2                           | 6.0                                 |
| *The antibacterial activity rate (%) | >99.9                         | >99.9                               |

**Notes :**

- 1.The control sample is plastic film without antimicrobial activity, provided by SGS laboratory.
- 2.U<sub>0</sub>: the average of the common logarithm of the number of viable bacteria(cells/cm<sup>2</sup>) recovered from the untreated test specimens immediately after inoculation.
- 3.U<sub>t</sub>: the average of the common logarithm of the number of viable bacteria(cells/cm<sup>2</sup>) recovered from the untreated test specimens after 24 h.
- 4.A<sub>t</sub>: the average of the common logarithm of the number of viable bacteria(cells/cm<sup>2</sup>) recovered from the treated test specimens after 24 h.
- 5.R: the value of antimicrobial activity,R=U<sub>t</sub>-A<sub>t</sub>.
- 6.\* The calculation formula of the antibacterial activity rate is  $[(B-C)/B] \times 100\%$ ;  
B: arithmetic average of the numbers of bacteria obtained from control samples after 24 h incubation(cells/cm<sup>2</sup>);  
C: arithmetic average of the numbers of bacteria obtained from samples after 24 h incubation(cells/cm<sup>2</sup>).
- 7.Pre-treatment: The surface of test specimen was wiped with 70% ethanol, rinsed with sterile water and let it air-dry.



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Page 2 of 3



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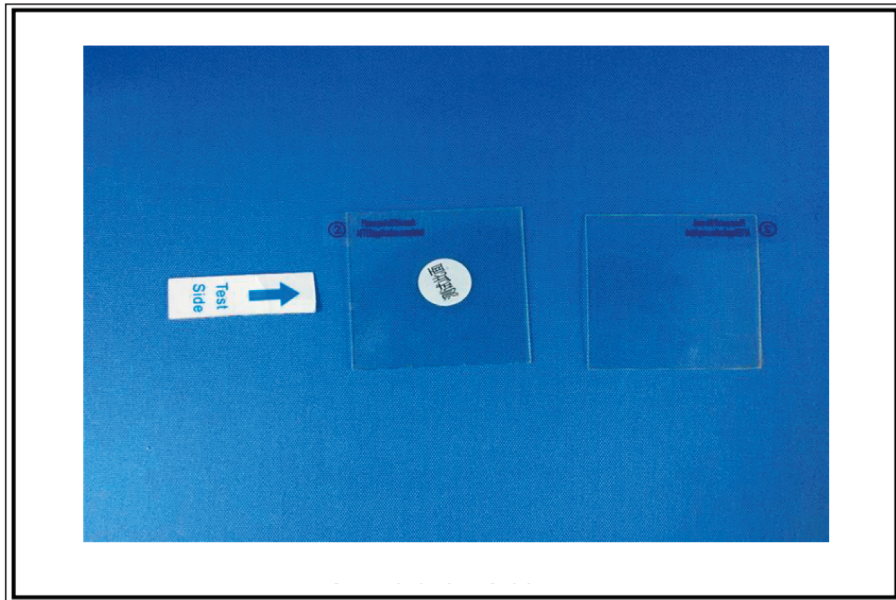
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Date: 18 Sep 2020

Sample photo:



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Page 3 of 3



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