

**Test Report** 

No. F690101/LF-CTSAYAR20-01338E

Issued Date: 2020.05.29

Sample No.

: AYAR20-01338E.001

Sample Description

: Anti bacteria Cu Film

Item / Part No.

: N/A

Material

: N/A

Test microorganisms	Result(s)							
	Initial bacteria number (CFU/film)	Bacteria number after 24 hr at 35 ℃			Antimicrobial activity			
		Control (CFU/film)	Sample (CFU/film)		R	Percentage (%)		
Escherichia coli ATCC 8739	2.2 x 10 <sup>5</sup>	1.2 x 10 <sup>8</sup>	1st	<25	6.7	>99.9%		
			2nd	<25	6.7	>99.9%		
			3rd	<25	6.7	>99.9%		
Staphylococcus aureus ATCC 6538	2.1 x 10 <sup>5</sup>	4.3 x 10 <sup>6</sup>	1st	<25	5.2	>99.9%		
			2nd	<25	5.2	>99.9%		
			3rd	<25	5.2	>99.9%		

## <Remark>

Sample material: Plastic film
 Incoulum Concentration:

Escherichia coli

: 2.2 x 105 CFU/film

Staphylococcus aureus

: 2.1 x 105 CFU/film

3) Method: JIS Z-2801 methods - Pour plate method

4) Dilution medium: 1/500 Nutrient broth (BD)



Test Report No. F690101/LF-CTSAYAR20-01071 Issued Date : 2020. 04. 16

**Sample No.** : AYAR20-01071.001

Sample Description : SAT13B

 Item / Part No.
 : N/A

 Material
 : N/A

Antimicrobial Activity (ISO 22196)										
Test microorganisms	Result(s)									
	Initial bacteria	Bacteria number after 24 hr at 35 $^\circ\mathrm{C}$			Antimicrobial activity					
	number (CFU/film)	Control (CFU/film)	Sample (CFU/film)		R	Percentage (%)				
Klebsiella pneumoniae ATCC 4352	2.1 x 10 <sup>5</sup>	1.0 x 10 <sup>8</sup>	1 <sup>st</sup>	4.8 x 10 <sup>5</sup>	2.3	99.5%				
			2 <sup>nd</sup>	3.4 x 10 <sup>5</sup>	2.5	99.7%				
			3 <sup>rd</sup>	3.4 x 10 <sup>5</sup>	2.5	99.7%				

## <Remark>

Sample material: Plastic
 Incoulum Concentration:

Klebsiella pneumoniae : 2.1 × 105 CFU/film

3) Method: ISO 22196 methods

4) Dilution medium: 1/500 Nutrient broth (BD)

5) The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report is not related to Korea Laboratory Accreditation and KS Q ISO/IEC 17025.

6) Verify for authenticity and validity in web site: <a href="https://twap.sgs.com/sgsrsts\_cloud">https://twap.sgs.com/sgsrsts\_cloud</a>.