

NEOTENY CO., LTD.
21F, S-Tower, 82, Saemunan-ro Jongno-gu
Seoul,
KOREA

The following sample(s) was/were submitted and identified by/on behalf of the client as:-
This report is not related to the Ministry of Food and Drug Safety 「ACT ON TESTING AND INSPECTION IN THE FOOD AND DRUG INDUSTRY」

SGS File No. : AYFN20-39271
Sample Description : ACLIV Antimicrobial silver film - clear type
Item no./Lot No. : NACS-R001
SGS Ref No. : AYHA20-13172
Test Period : 2020. 10. 08 to 2020. 10. 22
Purpose of Test Report : Data for reference
Test Results : For further details, please refer to following page (s)
Report Comments : The test results are limited to the requested product(sample name, item no.), and the sample don't have food Labeling information of Korea regulation.
This test report is not related to Korea Laboratory Accreditation and KS Q ISO/IEC 17025.
Verify for authenticity and validity in web site : <https://eecloud.sgs.com/index.aspx>.
This report cannot be used differently from the test purpose



ConardLee

Technical Manager / SGS KOREA

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

Results:

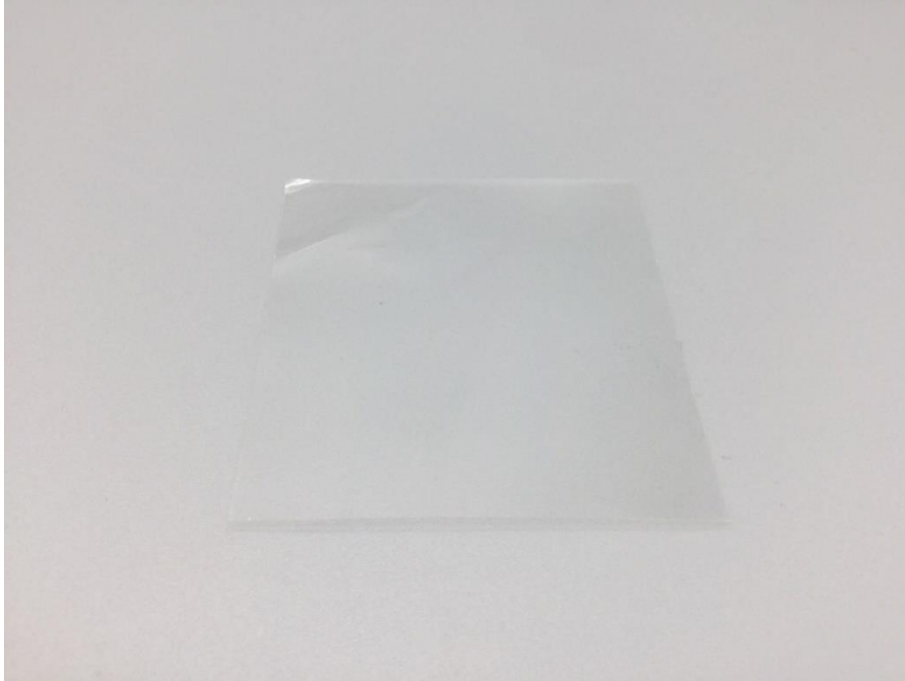
Antimicrobial Activity (JIS Z 2801:2010E)						
Test microorganisms	Initial bacteria number (CFU/film)	Control (CFU/film)	Result(s)			
			Sample (CFU/film)		Antimicrobial activity	
					R	Percentage (%)
<i>Escherichia coli</i> ATCC 8739	1.9 x 10 ⁵	2.6 x 10 ⁸	1st	<25	7.0	>99.9%
			2nd	<25	7.0	>99.9%
			3rd	<25	7.0	>99.9%
<i>Staphylococcus aureus</i> ATCC 6538P	1.7 x 10 ⁵	4.4 x 10 ⁷	1st	<25	6.2	>99.9%
			2nd	<25	6.2	>99.9%
			3rd	<25	6.2	>99.9%
<i>Klebsiella pneumoniae</i> ATCC 4352	2.0 x 10 ⁵	9.6 x 10 ⁷	1st	<25	6.6	>99.9%
			2nd	<25	6.6	>99.9%
			3rd	<25	6.6	>99.9%

<Remark>

- 1) Inoculum Concentration :
Escherichia coli : 1.9 x 10⁵ CFU/film
Staphylococcus aureus : 1.7 x 10⁵ CFU/film
Klebsiella pneumoniae : 2.0 x 10⁵ CFU/film
- 2) Method: JIS Z-2801 methods- Pour plate method
- 3) Dilution Medium : 1/500 Nutrient broth (BD)
- 4) Inoculations : 35 °C, 24 hr
- 5) Incubation : 35 °C, 48 hr
- 6) Material : Polyester based film

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).





Picture of Sample as Received :



AYFN20-39271





This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

- Antimicrobial Activity of Photo: *Escherichia coli* -

Control	Sample 1 st												
													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">BACTERIUM: <i>Escherichia coli</i> ATCC 8739</td> </tr> <tr> <td colspan="2">SGS FILE NO. : Control</td> </tr> <tr> <td>DATE: 2020-10-22</td> <td>REF.: JIS Z 2801</td> </tr> </table>	BACTERIUM: <i>Escherichia coli</i> ATCC 8739		SGS FILE NO. : Control		DATE: 2020-10-22	REF.: JIS Z 2801	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">BACTERIUM: <i>Escherichia coli</i> ATCC 8739</td> </tr> <tr> <td colspan="2">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td>DATE: 2020-10-22</td> <td>REF.: JIS Z 2801</td> </tr> </table>	BACTERIUM: <i>Escherichia coli</i> ATCC 8739		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801
BACTERIUM: <i>Escherichia coli</i> ATCC 8739													
SGS FILE NO. : Control													
DATE: 2020-10-22	REF.: JIS Z 2801												
BACTERIUM: <i>Escherichia coli</i> ATCC 8739													
SGS FILE NO. : AYFN20-39271													
DATE: 2020-10-22	REF.: JIS Z 2801												
													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">BACTERIUM: <i>Escherichia coli</i> ATCC 8739</td> </tr> <tr> <td colspan="2">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td>DATE: 2020-10-22</td> <td>REF.: JIS Z 2801</td> </tr> </table>	BACTERIUM: <i>Escherichia coli</i> ATCC 8739		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">BACTERIUM: <i>Escherichia coli</i> ATCC 8739</td> </tr> <tr> <td colspan="2">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td>DATE: 2020-10-22</td> <td>REF.: JIS Z 2801</td> </tr> </table>	BACTERIUM: <i>Escherichia coli</i> ATCC 8739		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801
BACTERIUM: <i>Escherichia coli</i> ATCC 8739													
SGS FILE NO. : AYFN20-39271													
DATE: 2020-10-22	REF.: JIS Z 2801												
BACTERIUM: <i>Escherichia coli</i> ATCC 8739													
SGS FILE NO. : AYFN20-39271													
DATE: 2020-10-22	REF.: JIS Z 2801												
Sample 2nd	Sample 3rd												





This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

- Antimicrobial Activity of Photo: *Klebsiella pneumoniae* -

Control	Sample 1 st																
																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SGS KOREA CO., LTD</td> </tr> <tr> <td colspan="2" style="text-align: center;">BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352</td> </tr> <tr> <td colspan="2" style="text-align: center;">SGS FILE NO. : Control</td> </tr> <tr> <td style="text-align: center;">DATE: 2020-10-22</td> <td style="text-align: center;">REF.: JIS Z 2801</td> </tr> </table>	SGS KOREA CO., LTD		BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352		SGS FILE NO. : Control		DATE: 2020-10-22	REF.: JIS Z 2801	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SGS KOREA CO., LTD</td> </tr> <tr> <td colspan="2" style="text-align: center;">BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352</td> </tr> <tr> <td colspan="2" style="text-align: center;">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td style="text-align: center;">DATE: 2020-10-22</td> <td style="text-align: center;">REF.: JIS Z 2801</td> </tr> </table>	SGS KOREA CO., LTD		BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801
SGS KOREA CO., LTD																	
BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352																	
SGS FILE NO. : Control																	
DATE: 2020-10-22	REF.: JIS Z 2801																
SGS KOREA CO., LTD																	
BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352																	
SGS FILE NO. : AYFN20-39271																	
DATE: 2020-10-22	REF.: JIS Z 2801																
																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SGS KOREA CO., LTD</td> </tr> <tr> <td colspan="2" style="text-align: center;">BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352</td> </tr> <tr> <td colspan="2" style="text-align: center;">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td style="text-align: center;">DATE: 2020-10-22</td> <td style="text-align: center;">REF.: JIS Z 2801</td> </tr> </table>	SGS KOREA CO., LTD		BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SGS KOREA CO., LTD</td> </tr> <tr> <td colspan="2" style="text-align: center;">BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352</td> </tr> <tr> <td colspan="2" style="text-align: center;">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td style="text-align: center;">DATE: 2020-10-22</td> <td style="text-align: center;">REF.: JIS Z 2801</td> </tr> </table>	SGS KOREA CO., LTD		BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801
SGS KOREA CO., LTD																	
BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352																	
SGS FILE NO. : AYFN20-39271																	
DATE: 2020-10-22	REF.: JIS Z 2801																
SGS KOREA CO., LTD																	
BACTERIUM: <i>Klebsiella pneumoniae</i> ATCC 4352																	
SGS FILE NO. : AYFN20-39271																	
DATE: 2020-10-22	REF.: JIS Z 2801																
Sample 2nd	Sample 3rd																

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

- Antimicrobial Activity of Photo: *Staphylococcus aureus* -

Control	Sample 1 st																
																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SGS KOREA CO., LTD</td> </tr> <tr> <td colspan="2" style="text-align: center;">BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P</td> </tr> <tr> <td colspan="2" style="text-align: center;">SGS FILE NO. : Control</td> </tr> <tr> <td style="width: 50%;">DATE: 2020-10-22</td> <td style="width: 50%;">REF.: JIS Z 2801</td> </tr> </table>	SGS KOREA CO., LTD		BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P		SGS FILE NO. : Control		DATE: 2020-10-22	REF.: JIS Z 2801	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SGS KOREA CO., LTD</td> </tr> <tr> <td colspan="2" style="text-align: center;">BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P</td> </tr> <tr> <td colspan="2" style="text-align: center;">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td style="width: 50%;">DATE: 2020-10-22</td> <td style="width: 50%;">REF.: JIS Z 2801</td> </tr> </table>	SGS KOREA CO., LTD		BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801
SGS KOREA CO., LTD																	
BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P																	
SGS FILE NO. : Control																	
DATE: 2020-10-22	REF.: JIS Z 2801																
SGS KOREA CO., LTD																	
BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P																	
SGS FILE NO. : AYFN20-39271																	
DATE: 2020-10-22	REF.: JIS Z 2801																
																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SGS KOREA CO., LTD</td> </tr> <tr> <td colspan="2" style="text-align: center;">BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P</td> </tr> <tr> <td colspan="2" style="text-align: center;">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td style="width: 50%;">DATE: 2020-10-22</td> <td style="width: 50%;">REF.: JIS Z 2801</td> </tr> </table>	SGS KOREA CO., LTD		BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SGS KOREA CO., LTD</td> </tr> <tr> <td colspan="2" style="text-align: center;">BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P</td> </tr> <tr> <td colspan="2" style="text-align: center;">SGS FILE NO. : AYFN20-39271</td> </tr> <tr> <td style="width: 50%;">DATE: 2020-10-22</td> <td style="width: 50%;">REF.: JIS Z 2801</td> </tr> </table>	SGS KOREA CO., LTD		BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P		SGS FILE NO. : AYFN20-39271		DATE: 2020-10-22	REF.: JIS Z 2801
SGS KOREA CO., LTD																	
BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P																	
SGS FILE NO. : AYFN20-39271																	
DATE: 2020-10-22	REF.: JIS Z 2801																
SGS KOREA CO., LTD																	
BACTERIUM: <i>Staphylococcus aureus</i> ATCC 6538P																	
SGS FILE NO. : AYFN20-39271																	
DATE: 2020-10-22	REF.: JIS Z 2801																
Sample 2nd	Sample 3rd																

*** End of Report ***

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).