



# ISHIZUKA GLASS Co., Ltd.

## Advanced Glass Company

1880 Kawai-cho, Iwakura-shi, Aichi-ken 482-8510, JAPAN TEL:+81-587-37-3251 / FAX:+81-587-37-3230

2 April 2015

Messrs. Unitum-Sanit Plast

ISHIZUKA GLASS CO., LTD.  
Advanced Glass Company

## REPORT ON ANTI-MICROBIAL TEST RESULT

### 1. Sample:

PP plate sample received on March 16<sup>th</sup> (IONPURE IP)

No.	Sample
1	Blank
2.	0.3%
3.	0.4%
4.	0.5%

### 2. Outline of test:

The test was executed in according with "JIS Z 2801-2010."

<Bacteria used for test>

*Escherichia coli* NBRC3972

*Staphylococcus aureus* NBRC12732

### 3. Test result:

Table 1. Test result of Anti-microbial effect against *Escherichia coli*

Sample	Number of living bacteria			Antimicrobial activity value against Blank	Reduction %
	At beginning (Per cm <sup>2</sup> )	After 24 hours (Per piece)	After 24 hours (Per cm <sup>2</sup> )		
1. Blank	$1.3 \times 10^4$	$4.8 \times 10^4$	$3.0 \times 10^3$	—	—
2. 0.3%	$1.3 \times 10^4$	$<1 \times 10^2$	$<6.3$	$>2.6$	$>99$
3. 0.4%	$1.3 \times 10^4$	$<1 \times 10^2$	$<6.3$	$>2.6$	$>99$
4. 0.5%	$1.3 \times 10^4$	$<1 \times 10^2$	$<6.3$	$>2.6$	$>99$
Control (Film only)	$1.3 \times 10^4$	$2.3 \times 10^7$	$1.4 \times 10^6$		

Table 2. Test result of Anti-microbial effect against *Staphylococcus aureus*

Sample	Number of living bacteria			Antimicrobial activity value against Blank	Reduction %
	At beginning (Per cm <sup>2</sup> )	After 24 hours (Per piece)	After 24 hours (Per cm <sup>2</sup> )		
1. Blank	$6.9 \times 10^3$	$1.1 \times 10^4$	$6.8 \times 10^2$	—	—
2. 0.3%	$6.9 \times 10^3$	$<1 \times 10^2$	$<6.3$	$>2.0$	$>99$
3. 0.4%	$6.9 \times 10^3$	$<1 \times 10^2$	$<6.3$	$>2.0$	$>99$
4. 0.5%	$6.9 \times 10^3$	$<1 \times 10^2$	$<6.3$	$>2.0$	$>99$
Control (Film only)	$6.9 \times 10^3$	$3.4 \times 10^6$	$2.1 \times 10^5$		



# ISHIZUKA GLASS Co., Ltd.

## Advanced Glass Company

---

1880 Kawai-cho, Iwakura-shi, Aichi-ken 482-8510, JAPAN TEL:+81-587-37-3251 / FAX:+81-587-37-3230

#### 4. Consideration:

Sample 2, 3 and 4 showed antimicrobial efficacy against both *Escherichia coli* and *Staphylococcus aureus* as its activity value exceeded the standard value of 2.0, which means this application has a >99% bacterial reduction rate.

ISHIZUKA GLASS CO., LTD.



---

Tomoshige Hasegawa  
MANAGER