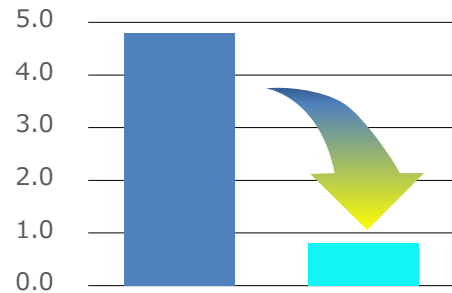


Efficacy confirmed against three (3) kinds of viruses

Ishizuka Glass would like to take an opportunity to introduce our new glass based antimicrobial agent which has been confirmed its anti-viral efficacy against Novel Coronavirus (SARS-CoV-2), Influenza A virus (H3N2), and Cat calicivirus (F-9) (norovirus substitute).

Novel Coronavirus (SARS-CoV-2)

Sample	Infection Value		Anti-viral activity value
	At Start	After 24 hours	
1. Blank	5.67	4.83	—
2. Developmental	5.67	<0.80	≥4.0

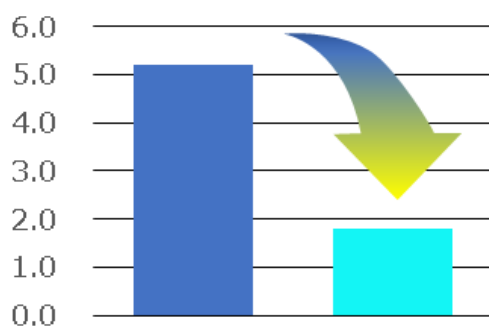


When anti-viral test was conducted in an external laboratory in accordance with ISO21702, polyethylene film incorporated with this new glass has shown the efficacy against all three kinds of viruses as its reduction percentage was more than 99.9%. We could previously confirm that “IONPURE” has shown the reduction in certain virus, however this is our first time to confirm the efficacy with one (1) product covering all of these three. Our aim is to expand our business to our existing and new potential customers by adding this additional function and benefit with this antiviral function.

We will further devote our development of glass based antimicrobial agents and deodorizing additive by improving the current technology to deliver our innovation to the world for comfortable, reliable and safe livings.

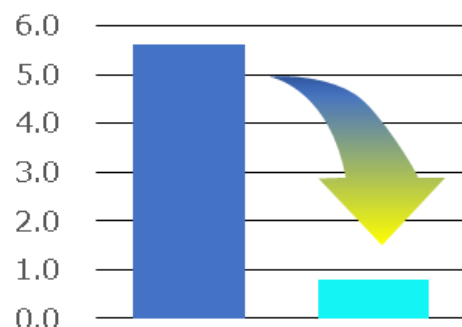
Influenza A virus (H3N2)

Sample	Infection Value		Anti-viral activity value
	At Start	After 24 hours	
1. Blank	5.72	5.24	—
2. Developmental	5.72	1.75	3.5



Cat calicivirus (F-9)

Sample	Infection Value		Anti-viral activity value
	At Start	After 24 hours	
1. Blank	5.90	5.62	—
2. Developmental	5.90	<0.80	≥4.8



<About IONPURE>

“IONPURE,” the inorganic glass based antimicrobial agent of Ishizuka Glass Co., Ltd., has been applied in various types of applications such as polymer, film, coating, and fiber due to its safe and heat durable features.

One of the major features of “IONPURE” is to achieve antimicrobial efficacy by adding small amount of concentration by dispersing it uniformly as its glass composition and glass particles are accommodated appropriately.

In addition, firm efficacy has been confirmed, in accordance with water durability conditions set by “Society of International Sustaining Growth for Antimicrobial Articles” (SIAA). This condition is applied to polymer and treated articles used in kitchen and bathroom settings etc. The “IONPURE” has also shown the firm efficacy for apparels taking into the consideration of laundry conditions which are set by “Japan Textile Evaluation Technology Council” (SEK).

【If you are interested, please contact to:】

Ishizuka Glass Co., Ltd.

New Business and Functional Materials Company

Functional Materials Department

e-mail : ceramics@ishizuka.co.jp