

October 20, 2020
 SINANEN HOLDINGS CO., LTD.
 Sinanen Zeomic Co., Ltd.

Demonstrating an effective virus reduction rate of more than 99.99%* with the silver-based antibacterial agent "Zeomic®" mixed into plastic resin.

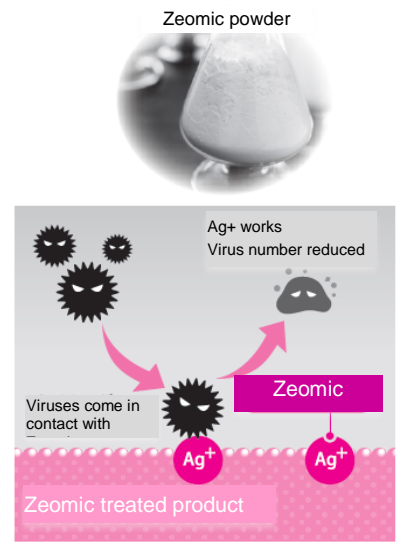
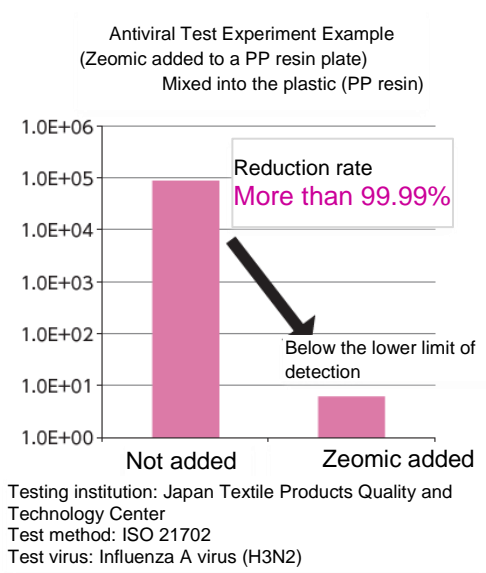
~ Antiviral effect confirmed for the influenza A virus (N3N2) ~

SINANEN HOLDINGS CO., LTD. (Headquarters: Minato-ku, Tokyo; President & CEO: Masaki Yamazaki; hereinafter referred to as "SINANEN HOLDINGS"), which provides comprehensive services with energy, home and life businesses, announces that Sinanen Zeomic Co., Ltd. (Headquarters: Nagoya, Aichi Prefecture, President: Mitsuaki Muraio, hereinafter referred to as "Sinanen Zeomic"), a subsidiary that manufactures and sells silver-based antibacterial agents, did an antiviral test of a PP resin plate to which the inorganic silver-based antibacterial agent "Zeomic®" was added, and demonstrated an antiviral effect for the influenza A virus (H3N2) with a virus reduction rate of more than 99.99%.

The inorganic silver-based antibacterial agent "Zeomic®" demonstrates an antibacterial effect with the silver ions inhibiting the action of enzymes in the metabolic system of microorganisms. Since, compared to organic antibacterial agents, inorganic antibacterial agents are generally highly safe, durable and heat resistant, they are used in a wide range of daily life applications such as home appliances, food sanitation, interiors, building materials, textiles, daily necessities, cosmetics and medical devices.

Including the recent novel coronavirus, viruses such as the influenza virus and norovirus, which are typical winter viral infections, are thought to be transmitted by droplet infection or contagious infection. In order to control the spread of infectious diseases caused by viruses, it is necessary more than ever before to create a safer and more secure living environment in terms of daily hygiene.

Therefore, with the cooperation of the Japan Textile Products Quality and Technology Center, we conducted a proof-of-concept examination of the antiviral effect of "Zeomic®". As a result of checking the antiviral effect of plastics containing "Zeomic®", it was demonstrated that it had an antiviral effect of reducing viruses by more than 99.99%.



While the antiviral effect has already been confirmed in the case of adding to each product with coating and post-fiber processing, and the good effect has been confirmed for the influenza A virus (H3N2) and the feline calicivirus (norovirus alternative), this proves that it is also applicable for applications where it is mixed into the plastic, where there is a high product need.

While one of the typical anti-virus measures is a disinfectant spray such as ethanol, the effect is limited to only when it is sprayed. On the other hand, since "Zeomic®" is an inorganic material, has high heat resistance, and does not have volatile decomposition, it is characterized by maintaining a stable antiviral effect for a long period of time. In addition, because it is a white powder, the color of the material can be utilized and it can be applied to various product applications.

Sinanen Zeomic will continue to contribute to the healthy lifestyles and living environments of people through the manufacture and sale of silver-based antibacterial agents.

* "Zeomic®" is a registered trademark of Sinanen Zeomic.

[Examination Outline]

Testing institution: Japan Textile Products Quality and Technology Center

Examination period: May to July 2020

Specimen: PP resin plate

Test virus: Influenza A virus (H3N2)

Examination method: ISO 21702 (measurement of antiviral activity on plastic and non-porous surfaces)

■ Sinanen Zeomic Co., Ltd. <https://www.zeomic.co.jp/en/>

A wholly-owned subsidiary of SINANEN HOLDINGS CO., LTD., it is engaged in the manufacturing and sales of antibacterial agents such as "Zeomic". In 1984, Shinagawa Fuel Co., Ltd. (currently SINANEN HOLDINGS) established Sinanen New Ceramics Co., Ltd. It continued research and development of antibacterial agents using silver and antibacterial zeolite, and obtained numerous patents. Laying the foundation as a manufacturer of inorganic antibacterial agents, in 1991 Sinanen Zeomic Co., Ltd. was established. As a pioneer of inorganic antibacterial agents, it is on the road to becoming the world's top manufacturer.

■ About SINANEN HOLDINGS CO., LTD. <https://sinanengroup.co.jp/en/>

Founded in 1927, SINANEN HOLDINGS CO., LTD. is the holding company of our corporate Group for developing comprehensive energy, home and life service businesses. With our Group mission to "contribute to realizing a comfortable life for all customers in their communities through energy, home and life services", we provide an energy wholesale and retail peripheral business for consumers, an energy solution business for corporations, and non-energy businesses (bicycle-sharing business, environmental & recycling business, system development business, antibacterial business, and building maintenance & management business, etc.)

[Contact information with regards to "Zeomic"]

Enoki and Kano, corporate planning department, Sinanen Zeomic Co., Ltd.

TEL: +81-52-653-3201 FAX: +81-52-654-2369 E-mail: planning@zeomic.co.jp

[Contact information for the media]

Yoshida, Kimura and Takeshima, public relations IR team, corporate planning department, SINANEN HOLDINGS CO., LTD.

TEL: +81-3-6478-7807 FAX: +81-3-6478-7824 E-mail: kouhou@sinanengroup.co.jp