

Development of Novel Cosmetic Ingredient that Has Antiviral Activity The Functional Polymer Beats Novel Coronavirus!

NIPPON SHOKUBAI CO., LTD. (Head quarter: Osaka-city, Japan, President: Yujiro Goto, hereinafter “Nippon Shokubai”) confirmed that the functional polymer we have developed as cosmetic ingredient has antiviral activity against novel coronavirus. It is expected to be applied to cosmetics intended to gently moisturize and protect skin and hair from various bacteria and virus.

Nippon Shokubai has designed this functional polymer composed of both hydrophilic monomers and hydrophilic monomers. Based on this structure, we succeeded in the development of this polymer which has both water retaining property and film forming ability by utilizing Nippon Shokubai’s polymerization technology. It has been confirmed that the polymer has antibacterial activity and antiviral activity against influenza virus which is a kind of envelope virus*1.

In order to further verify the antibacterial and antiviral functions of the polymer, Nippon Shokubai evaluated the antiviral activity against SARS coronavirus 2 (SARS-CoV-2*2) that causes coronavirus disease 2019 (COVID-19). This evaluation showed that this polymer has the effect of inactivating the novel coronavirus by 99% at a treatment time of 60 minutes and 99.9% at 120 minutes under test conditions with a polymer concentration of 0.1%. In addition, we will continue to obtain more detailed data and clarify the effect of polymer concentration against SARS-CoV-2.

Cosmetics containing this polymer are expected to protect the skin and hair from damage caused by various bacteria and viruses.

Some of the results will be presented at CITE JAPAN 2021 (The 10th Cosmetic Ingredients & Technology Exhibition Japan).

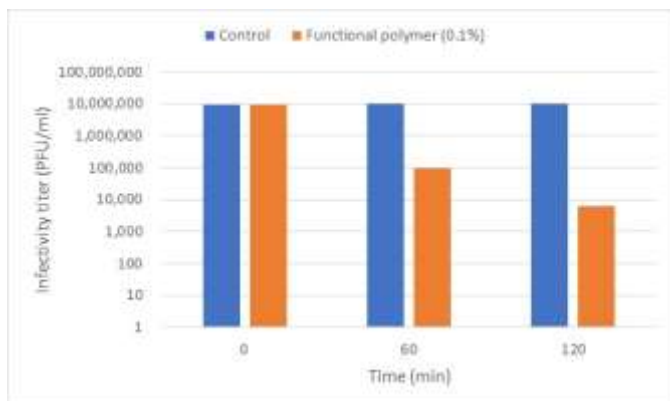


Fig. 1. Anti-virus activity against novel coronavirus (SARS-Cov-2)

Terminology Description

- *1 Envelope virus: A virus with the outermost layer found in many types of viruses such as herpes simplex virus, influenza virus and human immunodeficiency virus.
- *2 SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a virus belonging to SARS-associated coronavirus, which causes the novel coronavirus infection (COVID-19).

About NIPPON SHOKUBAI Co., Ltd.: Since 1941, Nippon Shokubai has grown up its business with unique catalyst technology. Nippon Shokubai has supplied, for example, ethylene oxide, acrylic acid, automobile catalysts, process catalysts and so on. Among all, our global market share of superabsorbent polymers is the largest in the world now. Nippon Shokubai is a global chemical company operating under its corporate mission "TechnoAmenity – Providing affluence and comfort to people and society, with our unique technology."

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