



PVC FILM INACTIVATES THE CORONAVIRUS

A product by a Brazilian plastics manufacturer Alpes halts viral activity within 15 minutes.

In tests conducted at a laboratory in the University of São Paulo's Biomedical Sciences Institute, a PVC film containing silver and silica nanoparticles eliminated 79.9% of SARS-CoV-2 particles in three minutes, and 99.99% within 15 minutes. Alpes' innovation will be used for packaging meat, fruit, cold cuts and other foods. The technology was developed and licenced by Nanox, a Brazilian company based in São Paulo.

PVC FILM WITH SILVER-SILICA NANOPARTICLES INACTIVATED 79.9% OF SARS-COV-2 PARTICLES IN THREE MINUTES, AND 99.99% WITHIN 15 MINUTES

With the onset of the COVID-19 pandemic, they decided to see if the material could also eliminate SARS-CoV-2. The film was tested against ISO 21702:2019, the technical standard governing measurement of antiviral activity on plastic and other non-porous surfaces.

Samples of the material with and without silver-silica nanoparticles were kept in direct contact with SARS-CoV-2 for varying amounts of time. The viral particles found in the material were removed, and their replication rate after exposure to the film was measured.

The viral genetic material quantified by PCR showed a reduction of almost 100% in copies of SARS-CoV-2 after 15 minutes of exposure to the film.

"Considering its use in wrapping for food products that are exposed in supermarkets, 15 minutes for the film to eliminate the virus completely from the surface of the material is satisfactory," says Nanox CEO Luiz Gustavo Pagotto Simões.

Alpes has been producing plastic film with silver nanoparticles to protect food from fungi and bacteria since 2014.