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Short description

We offer a new product, Smart Gloves, a new generation of gloves that will be effective for use by both medical personnel and ordinary people. Smart Gloves provide insulation almost at the level of elastomer gloves and do not require professional removal from the hands, because they are simply washed off with warm water and soap, along with accumulated microscopic contaminants and dangerous bacteria.

Smart Gloves are a mixture of cellulose fibers with the addition of antiseptic components and a volatile binding compound that evaporates after application to the hands within a few seconds, leaving an even layer of cotton fabric on the skin, optionally with an antiseptic composition.

Full description

Every year in the modern world, infectious diseases are spreading more and more. This is due to such objective processes as:

urbanization;

flights by planes, travel by high-speed trains;

increasing the level of people's mobility;

global climate change;

risk of infection spreading from biological laboratories.

WHO warns of future epidemics after the Covid pandemic. And as the latest epidemic has shown, any measures to prevent a pandemic must be combined with a number of hygiene procedures for ordinary people. Among such procedures, one of the main places (along with using a mask and keeping a distance) is protecting the skin of the hands by wearing gloves or treating with antiseptic gels.

Although wearing gloves is the most effective way to keep your hands clean, the WHO did not recommend that people (non-medical staff) wear gloves during the Covid epidemic. This is because a person can harm themselves by first touching a contaminated surface and then touching an unprotected area of skin if they are not removed correctly, thereby exposing themselves to the risk of infection.

In addition, the widespread use of disposable gloves leads to a sharp increase in environmental pollution from these disposable products, which is one of the main threats to the planet.

In order to solve these problems, we propose to use Smart Gloves, which will be effective in use by both medical personnel and ordinary people. At the same time, Smart Gloves provide insulation almost at the level of elastomer gloves and do not require professional removal from hands, because they are simply washed off with warm water and soap along with accumulated microscopic contaminants and dangerous bacteria. It is also important to note that after using Smart Gloves, there are no used disposable elastomer gloves left, which pollute the environment for tens or even hundreds of years, or require special expensive recycling.

Smart Gloves are a mixture of cellulose fibers with the addition of antiseptic components and a highly volatile binder that evaporates after application to the hands within a few seconds, leaving an even layer of cotton fabric on the skin, optionally with an antiseptic composition. All these components are environmentally friendly and decompose within the shortest possible time.

The technology of applying liquid fabric to the skin is not new, but its use in such a capacity as an analogue of protective gloves, including together with an antiseptic filling, is the subject of this authorship.

This technology can be used both in small bottles and sprayers for individual use and in stationary devices for group use. Such devices can be installed in public places next to hand dryers and can be useful not only during an epidemic, but also in everyday use, for example, when shopping in shopping centers.

Differences from existing technologies

Unlike existing gloves made from elastic materials, these gloves are sprayed on from a portable bottle, aerosol sprayer or stationary device and washed off with water after use.

Unlike modern liquid gloves, Smart Gloves contain cellulose fibers that provide mechanical protection against direct skin contact with contaminants.

Unlike liquid gloves, Smart Gloves have a longer shelf life and less erasability due to the presence of cellulose fibers.

Unlike liquid gloves, Smart Gloves provide a visible presence on the skin, allowing you to immediately see areas on the skin where the protective layer has not been applied or has already worn off.

Unlike liquid gloves, Smart Gloves provide greater water resistance because they require more water and mechanical friction to wash off.

Unlike existing gloves made from elastic materials, Smart Gloves are environmentally friendly, safely dissolving, flushing and subsequently recycled in the sewer system without long-term contamination.

Purpose and expected outcome

The goal and expected result of the Smart Gloves technology is to preserve the life and health of people both during epidemics and pandemics, and in everyday life, thanks to the availability of effective, simple and safe gloves to use.

Way of implementing the technology

The technology can be implemented through the synergy of existing technologies such as spray-on clothing, the use of antiseptic impregnations of cellulose fibers, and others.

Author

jonas.ignatonis@gmail.com Author ID: 7412024051410102100000000001

