



Ministry of Science & Technology

Pune based start-up all set to bring non-toxic, gentler, long lasting hand sanitiser to the market



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An environment friendly hand sanitizer that is gentle on the hands and does not dry them, will soon be available in the market. The alcohol free, aqueous, non-inflammable and non-toxic hand sanitizer has been developed from Silver Nanoparticles by a Pune based start-up.

Recurrent drying up of hands due to repeated application of hand sanitizers is a challenge which people have faced during the COVID 19 pandemic.

The hand sanitizer developed by WeinovateBiosolutions prolongs antimicrobial activity thus obviating the need for repeated applications. Silver nanoparticles give slow and sustained release of silver ions to kill microorganisms that come in contact. Besides, it can be stored in ambient conditions.

It has successfully completed Central Drugs Standards Control Organisation (CDSCO) approved clinical trial for the hand sanitizer and demonstrated high efficiency in killing viruses.

WeinovateBiosolutions was supported by CAWACH 2020 grant of National Science and Technology Entrepreneurship Development Board (NSTEDB) under the Department of Science and Technology (DST) and incubated at Entrepreneurship Development Centre (Venture Centre), Pune. They developed the colloidal silver solution-based hand sanitiser. The technology operates on the ability of the silver nanoparticles to prevent the synthesis of viral negative-strand RNA and viral budding.

“We are very confident of the study outcomes and waiting to get the license for our hand sanitiser formulation from CDSCO, India. We are sure that such innovation will push India towards its 'Atmanirbhar Bharat' mission and make India a self-sustained nation to face such pandemics in future”, said Dr. Anupama Engineer, Cofounder & COO WeinovateBiosolutions.

Silver nanoparticles have been found to be an effective antiviral which act against many deadly viruses like HIV, Hepatitis B, Herpes simplex virus, Influenza virus, and so on. Recent reports have suggested the role of Glutathione capped-Ag₂S NCs (Silver nanoclusters) in inhibiting the proliferation of Coronavirus by preventing the synthesis of viral negative-strand RNA and viral budding. The colloidal silver on which the technology of the sanitizers of WeinovateBiosolutions is based can help arrest Covid -19 spread by blocking the RNA replication and infectivity by blocking the surface glycoproteins.

A study to evaluate the efficacy of hand sanitiser on different types of viruses is also currently underway by the group.



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