



Design Innovation Centre (DIC) MNNIT Allahabad Contributes to India's battle against Novel Coronavirus

Social distancing and self-isolation have increasingly become the norm (Government mandate) during COVID-19 pandemic. This has led to increased delivery of items to our door steps which may be contaminated with novel coronaviruses as well. In addition, the chances of getting exposed through the usage of files, papers, currency and other inanimate objects has also increased.

To combat this problem, under the leadership of Prof. Rajeev Tripathi, Department of Biotechnology at MNNIT Allahabad has developed a low cost portable device to sanitize inanimate items such as: groceries, vegetables, fruits, currency notes, postal letters, files etc. It has been named "**VIRALYSER 1.0**". It is equipped with two UV-C (254 nm) fluorescent lamps which is capable of killing variety of microorganisms including novel coronavirus. It comes with a shelf having UV-C lamps (above and below it) and mirrored walls so that every surface may get even UV irradiation. It could be used in homes and offices at regular basis during this pandemic and beyond.



On similar lines, the team at MNNIT also fabricated a low cost face shield, named "**VIRO-SHIELD**", which is made up of a transparency sheet and expanded polyethylene foam (EPF). This design protects the full face and is "one size fits all", which can be effectively used by anyone who is in hotspot zone or by health workers in hospitals.



Developed under the **National Initiative of Design Innovation (NIDI)** a scheme under *Ministry of Human Resource Development (MHRD)* and "**Design Innovation Centre**" project, this initiative to fabricate Viralyser 1.0 and Viro-Shield was taken by Dr. Sameer Srivastava, Dr. Ambak K. Rai, Dr. Ashutosh Mani, Dr. N.K. Singh and Prof. Shivesh Sharma from Department of Biotechnology, MNNIT Allahabad. The present contribution will be serving as an important tool for battle against novel coronavirus.

Both these products have received good feedback from various stakeholders. As a part of social responsibility, Virosshield has been donated to the following:

- ❖ Superintendent of Police (Vigilance), Allahabad: 40 Units
- ❖ Security Personnel (MNNIT Allahabad): 200 Units
- ❖ Medical Staff (MNNIT Allahabad): 30 Units



In addition, various requests regarding the supply of in room disinfection UV-C device for offices (files, letters, currency and other inanimate items) i.e. Viralyzer 1.0 from some External Organizations and various sections of Institute have been received. However, in the current scenario of nationwide lockdown, we are awaiting supply of raw material so that requests can be catered.

Director MNNIT Allahabad, Prof. Rajeev Tripathi has emphasized that MNNIT Allahabad is ready to serve the society during and after COVID 19 pandemic by developing such low key effective technologies and innovations.