

NCL-supported start-up innovations join the fight against COVID-19

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New Delhi, April 09 (India Science Wire): The world is combatting COVID-19 pandemic with all its might. In India, various institutions are working hard at saving lives of people. Two innovative technologies developed by the start-ups supported by the National Chemical Laboratory (NCL), Pune, stand out and can be of great help in this fight against corona virus. One is the Digital InfraRed (IR) thermometer and the other is the Oxygen Enrichment Unit (OEU).

The handheld digital IR thermometer is developed by NCL's Venture Center Incubate. For the non-contact thermometer, mobile phone or power banks can be used as a power source. The design of IR thermometers, complete know-how, and mass manufacturing ready hardware and software design have been made available to manufacturers across India for free. This is an effort to enable a large number of manufacturers to manufacture the thermometers and cater to their local demands. "We are trying to bring simplicity in the design and share it with everyone so that the manufacturers need not to spend time of the R&D," said Pratik Kulkarni, co-founder, BMeK.



Digital IR Thermometer

As of now, the production of this thermometer is being scaled up in partnership with BEL (Bharat Electronics Ltd, Pune). In the coming two weeks, about 100 prototype units will be made for pilot distribution and testing at TUV Rheinland India Pvt. Ltd Bangalore.

The Oxygen Enrichment Unit is the other technology that is in great demand in the treatment of COVID-19 patients. As the lungs of COVID-19 patients get badly affected, the OEU can do the function of a ventilator by increasing the oxygen concentration from 21-22% to 38-40% from the ambient air. The OEU technology has been developed by CSIR-NCL and Genrich Membranes, a start-up innovation venture founded by Dr. Ulhas Kharul, Head of Polymer Science & Engineering Division at NCL.

"The surrounding air is being passed through the polymeric membrane with the help of a compressor that can pressurize the air in the membrane to make it oxygen rich. This is a

cost-effective way to administer oxygen to the people who want supplementary oxygen,” said Dr Kharul.



Oxygen Enrichment Unit

The uniqueness of the OEU is that it can be used in both home and hospital settings. The prototype units are ready at Pune and will be sent to TUV Rheinland India Pvt. Ltd, Bangalore, for testing and validation. About 10 OEU machines will be assembled by NCL-BEL in Pune and after the trials, scale-up will be done. (India Science Wire)

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