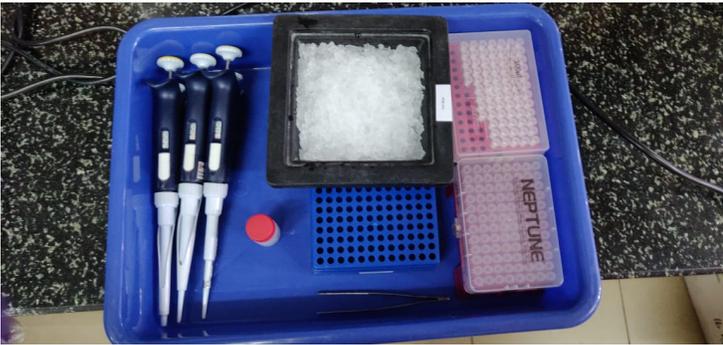


IIT Kgp develops ultra-low-cost portable device for COVID-19 testing

21 October 2020 | News

The test results are rendered via a custom-made mobile application for dissemination without requiring manual interpretation



'COVIRAP,' the diagnostic machine developed by IIT Kharagpur (Kgp) researchers, has been successfully validated for its efficacy in COVID-19 detection by the Indian Council of Medical Research (ICMR). Various commercial units have already approached the Institute for technology licensing to enable a rapid reach of this innovation to the common people.

This new testing method implements a highly reliable and accurate molecular diagnostic procedure that can be conducted in an ultra-low-cost portable device unit developed by the IIT Kharagpur research team. The test results are rendered via a custom-made mobile application for dissemination without requiring manual interpretation.

Dr Ramesh Pokhriyal Nishank, Minister of Education, GoI, said, "This innovation has made high-quality and accurate COVID testing affordable for the common people with a testing cost of around Rs 500/- which can further be reduced through government intervention. As informed by IIT Kharagpur, this machine can be developed at a cost of less than Rs 10,000/- with minimal infrastructural requirement making the technology affordable to common people.

Elaborating on the validation process of 'COVIRAP' Diagnostic Test, Dr Mamta Chawla Sarkar, International Virologist who oversaw the patient trials on behalf of ICMR-National Institute of Cholera and Enteric Diseases (NICED) said, "A detailed scrutiny of the testing results has clearly shown that this assay holds the capability of detecting extremely low levels of viral loads that any other method based on similar principles of testing, even those from the most celebrated research groups across the world, could not come up with so far."

The novel diagnostic platform, developed by a team of researchers lead by Prof Suman Chakraborty, Professor, Department of Mechanical Engineering, IIT Kharagpur, and Dr Arindam Mondal, Assistant Professor, School of Bio-Science, IIT Kharagpur, has been subjected to rigorous testing protocols as per ICMR guidelines, at ICMR-NICED, an Institute authorised by ICMR. The tests conducted there have revealed that the results from this new assay are of standards comparable to the celebrated RT-PCR tests, with a remarkably high level of specificity and sensitivity, the two common parameters used as indicators of efficacy of any diagnostic test.