

SCTIMST, Agappe unveil RNA extraction kit for COVID-19 detection

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Agappe Chitra Magna, a magnetic nanoparticle-based RNA extraction kit has been launched for use during testing for detection of COVID-19. It is developed by Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) - Trivandrum, an Institute of National Importance of the Department of Science and Technology (DST) along with Agappe Diagnostics Ltd, an in vitro diagnostics manufacturing company based in Cochin.

Inexpensive, fast, and accurate testing for COVID-19 virus is the cornerstone of containing its spread and providing appropriate help to the infected.

The Chitra Magna, an innovative RNA extraction kit developed by SCTIMST under the leadership of senior scientist, Dr. Anoopkumar Thekkuveetil, was transferred to Agappe Diagnostics in April 2020, and will now be available in the market as Agappe Chitra Magna RNA Isolation Kit.

This product has been independently validated at National Institute of Virology for Covid19 RNA isolation. Central Drugs Standard Control Organisation (CDSCO) has given approval for the commercialization of this kit. The kit can be used for RNA extraction for RT-LAMP, RT-qPCR, RT-PCR and other isothermal and PCR based protocols for the detection of SARS-COV-2.

It uses an innovative technology for isolating RNA using magnetic nanoparticles to capture the RNA from the patient sample. The magnetic nanoparticle beads bind to the viral RNA and, when exposed to a magnetic field, give a highly purified and concentrated RNA. As the sensitivity of the detection method is dependent on getting an adequate quantity of viral RNA, this innovation enhances the chances of identifying positive cases.

It is estimated that India would require about 8 lakh RNA extraction kits per month during the next six months, and Agappe Chitra Magna RNA Isolation Kit priced around Rs. 150 per kit is expected to reduce the cost of testing and the country's dependence on imported kits which cost around Rs 300. Agappe Diagnostics has a manufacturing capacity of 3 lakh kits per month.