Indian scientists have developed low cost diagnostic kit for COVID-19

Sree Chitra Tirunal Institute for Medical Sciences and Technology in Thiruvananthapuram, under the Department of Science and Technology, has developed an innovative diagnostic test kit named, Chitra Gene LAMP-N for the diagnosis of COVID-19.

This detects the N-Gene of virus using reverse transase loop-mediated amplification of viral nucleic acid or RT-LAMP technique. This new kit is considered as one of the first few confirmatory diagnostic test for N-gene of COVID-19 virus using the RT-LAMP technique in the world.

The test is highly specific that it can detect two regions of the gene which will ensure that the test does not fail even if one region of the viral gene undergoes mutation during its current spread. Another major advantage of the new test kit is that it very fast. According to the institute, the detection time is only 10 minutes and the sample to result time will be less than two hours.

At least 30 samples can be tested in a single batch in a single machine. The institute has also developed the specific RNA extraction kits along with Gene LAMP-N test kits and the testing device. Another advantage is that it is much cheaper. The device presently used for detection of COVID-19 costs nearly 15 to 45 lakh rupees whereas the new test device amounts to only 2.5 lakh rupees and the test kit of the presently used PCR kit, costs around 2,500 rupees per test, whereas the newly developed test kit costs only 1,000 rupees per test.

National Institute of Virology, Alappuzha had found that the new technique is giving cent per cent accurate result and now the ICMR approval for the same is awaited. Once the ICMR approval comes, this could a major step in our fight against COVID-19 in the country, creating our own faster, cheaper and accurate detection of virus.