Chitra Gene Lamp- N makes confirmatory test results- COVID-19

Part of: GS-III- S&T (PT-MAINS-PERSOANLITY TEST)

The confirmatory diagnostic test which detects the N Gene of SARS-COV2 using reverse transcriptase loop-mediated amplification of viral nucleic acid (RT-LAMP) will be one of world’s first few if not the first of its kinds in the world.

The test kit, funded by the DST called Chitra GeneLAMP-N is highly specific for SARS-CoV-2 N-gene and 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.

The tests performed at NIV Alappuzha (authorized by ICMR) show that Chitra GeneLAMP-N has 100% accuracy and match with test results using RT-PCR. This has been intimated to ICMR, the authority to approve it, for COVID-19 testing in India, following which License need to be obtained from CDSCO for manufacture.

Current PCR kits in India enable detection of E gene for screening and RdRp gene for confirmation. Chitra GeneLAMP-N gene testing will allow confirmation in one test without the need for a screening test and at much lower costs.

The detection time is 10 minutes and the sample to result time (from RNA extraction in swab to RT LAMP detection time) will be less than 2 hours. A total of 30 samples can be tested in a single batch in a single machine allowing large number of samples to be tested each day.

Indian Council of Medical Research

- Indian Council of Medical Research (ICMR) is the apex body in India for the formulation, coordination and promotion of biomedical research.
- Its mandate is to conduct, coordinate and implement medical research for the benefit of the Society; translating medical innovations into products/processes and introducing them into the public health system.
- It is funded by the Government of India through the Department of Health Research, Ministry of Health & Family Welfare.