

Virus diagnostic test may be delayed

The technology needs more confirmatory testing and changes in configuration, officials say

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NEW DELHI

A promising technology developed by a laboratory funded by the Department of Science and Technology to accelerate COVID-19 testing in India may be delayed for several more weeks.

The Chitra GeneLAMP-N, developed by the Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram, needs more confirmatory testing and changes in its configuration, officials said.

The technology uses a method called loop-mediated isothermal amplification (LAMP). The objective, like that of the gold-standard RT-PCR tests, is the same: to detect the presence of viral RNA. Both achieve this via a series of chemical transformations. The LAMP method is said to be faster but is a relatively newer technology,



Fast, but complicated: The new test uses a method called loop-mediated isothermal amplification (LAMP). ■REUTERS

more complicated in its design and has not been tested extensively for COVID-19 detection.

N gene test

Most RT-PCR kits focus on two different genes, the E (envelope) gene and the RdRP (RNA dependent RNA polymerase) gene. The

World Health Organization recommends a E and RdRP test, while the U.S.'s Centers for Disease Control and Prevention (CDC) requires an N gene test. The N gene test is a confirmatory test and widely employed in Germany and China, among other countries. However, the design of it is complicated and can be

expensive. The CDC protocol says three regions of the N gene must be analysed but the Chitra-model tests two to confirm the identity of the virus.

Though the Chitra test passed an initial assessment by the National Institute of Virology in Alappuzha, a subsequent assessment showed that it was not performing as accurately as desired. "We are testing two N gene regions, so we need to recalibrate the machine to test both of them independently as a common cut-off wasn't working well," Asha Kishore, Director, SCTIMST, told *The Hindu*. "This is expected as all technology being used today [for COVID-19 diagnosis], such as RT-PCR or TruNat, have undergone multiple evaluations. This is a confirmatory test and needs to be absolutely solid. We need time until May end."

The Chitra test could potentially speed up the testing of a batch of suspected COVID-19 samples by 15 times and cut costs by two-thirds. The technology is licensed to Agape Diagnostics Ltd., an Ernakulam-based company.

Faster, cheaper

Union Health Minister Harsh Vardhan tweeted: "Sree Chitra Tirunal Institute for Medical Sciences & Tech, Trivandrum, an Institute of National Importance, of the @IndiaDST, has developed a diagnostic test kit that can confirm COVID19 in 2 hours at a low cost."

The steady rise in confirmed cases in India is due to an acceleration in testing. The Indian Council of Medical Research reported having tested 1.94 million samples as of Thursday with Dr. Vardhan claiming that India was now testing about 100,000 samples a day.

Surveillance test for migrants

A cohort of 25 people will be identified and throat or nasal swab collected



A one-time RT-PCR-based pooled sampling will be conducted. ■T. SINGaravelou

The Union Health Ministry on Thursday said a decision had been reached to use one-time RT-PCR-based pooled sampling for surveillance purposes for migrant workers in institutional quarantine facilities, international passengers in institutional quarantine facilities and hotels earmarked for quarantine, and for surveillance purposes in green zones (districts with no case or no case reported in last 21 days).

Issuing fresh guidelines for pooled sampling for migrants/returnees from

down protocol by trained laboratory personnel under appropriate protective gear (apron, hand glove, face-shield/goggles, N-95 mask), as per the ICMR protocol.

As per the new guidelines, the report will be conveyed to the quarantine/concerned facility within 24 hours.

"If any of the pooled samples tests positive, individual samples would be tested from the aliquoted samples preserved in the laboratory," notes the Ministry.

Giving details of the process of collection of samples, the Ministry said proper labelling (name/age/gender/specimen ID) needed to be done on specimen container.

"Twenty-five such samples of such cohort would be packed in triple layer packaging and will be transported to the identified laboratory under cold chain as per ICMR guidelines," noted the Health Ministry. The guidelines add that the outer container mentioning "be tested for SARS-CoV-2" will also bear the details of sender (name/address/phone number). It adds that the samples will be aliquoted and thereafter pooled samples from 25 specimens shall be tested in the laboratory by RT-PCR method.

Passengers wanting to travel via 'special train' services will need to mandatorily provide destination address at the time of booking tickets.

Destination mandatory for train tickets

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The Railways on Thursday said it had started recording the destination address of passengers booking tickets on the website to help facilitate contact tracing. "With effect from May 13, IRCTC is taking the destination address of all passengers booking tickets. This will help in contact tracing, if required later," a spokesperson said.

BMS to stage protest over suspension of labour laws

'Workers suffering due to violation of Migrant Labour Act'

