Indian Institute of Technology (IIT) Guwahati, in association with RR Animal Healthcare Ltd and Guwahati Medical College and Hospital (GMCH), has developed low-cost diagnostic kits.

These are Viral Transport Media (VTM) kits, RT-PCR kits, and RNA isolation kits.

The VTM kits are the first-stop source used to collect nasal and oral swab specimens from an individual source to a laboratory safely for culture and testing.

During this period, the virus, if present, in the sample specimens should remain intact until the testing procedure is completed.

The kit consists of a comprehensive solution specially formulated for the collection and transport of SARS-CoV-2.

To bring down the cost of kits, we have used material that are available in the local market and they are as per the World Health Organisation (WHO) recommendation.

These kits comprise two transport media, one for nasopharyngeal and the other for oropharyngeal specimen collection swabs.

Both of these are safe to use as they are recommended and validated by the Centre for Disease Control and Prevention (CDC) as well.

The complete package is suitable for the collection, transport, maintenance, and long-term freezer storage of viral specimens.

The unique formulation of the transport medium helps in preserving the viability of viruses for up to 72 hours (at refrigerated temperatures).

In addition to the sterile VTM kits, the Institute has also developed RNA isolation kits and RT-PCR kits jointly with RR Animal Healthcare Ltd.

The isolated and purified RNA is then converted to DNA by an enzyme Reverse Transcriptase (RT), which is used to confirm the presence or absence of COVID-19.