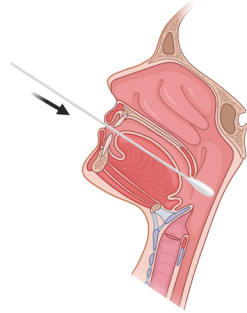
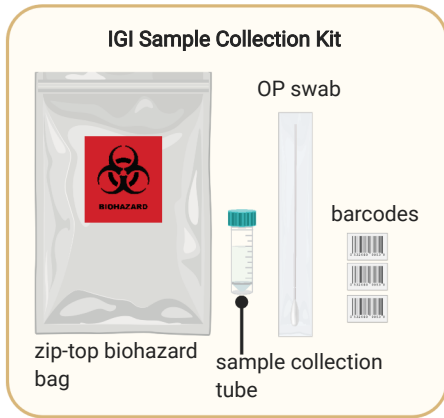


# Technical Diagram of the IGI SARS-CoV-2 Diagnostic Testing Method

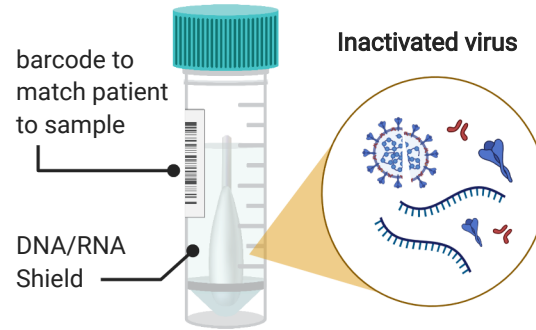
## 1 Oropharyngeal Swab

A specimen is collected using IGI's custom kit and the provided swab. NP, OP, or NP+OP are acceptable.



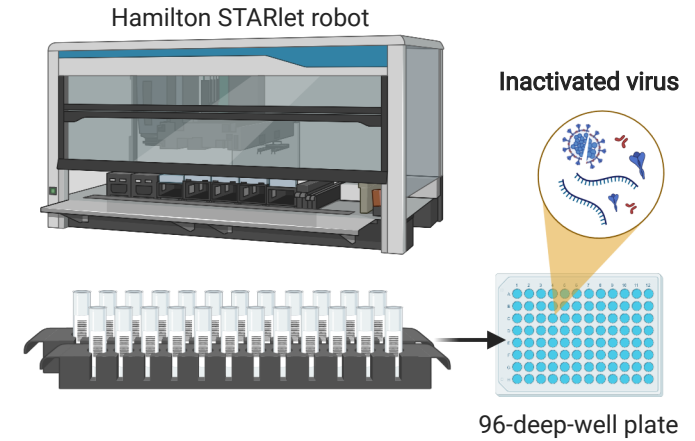
## 2 Collected Specimen

Swab is transferred to supplied specimen collection tube containing inactivation and transport medium.



## 3 Accessioning and Arraying

Specimens are accessioned into our LIMS by barcode scan and arrayed into 96-deep-well plates by a liquid handling robot.



## 4 RNA Extraction & RT-qPCR Assembly

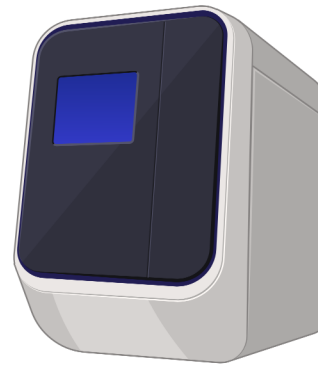
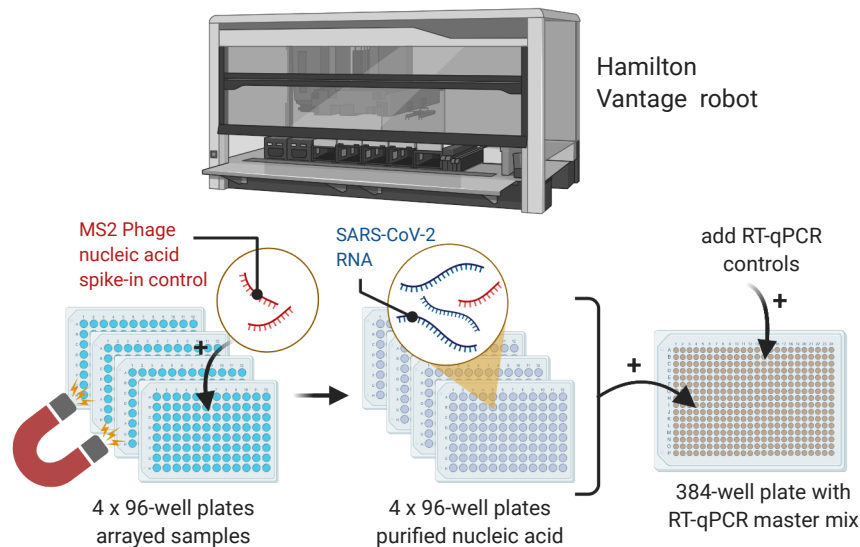
A liquid handling robot performs RNA extraction using Thermo Fisher's MagMAX Viral/Pathogen Nucleic Acid Isolation kit and then assembles reactions for RT-qPCR with Thermo Fisher's TaqPath RT-PCR COVID-19 Kit.

## 5 RT-qPCR

RT-qPCR is performed using an ABI QuantStudio 6 Flex Real-Time PCR System.

## 6 Data Interpretation

Samples that cross the fluorescence threshold at a cycle number lower than the defined cutoff for two out of three SARS-CoV-2 target genes return a positive test result. To return a negative result (no SARS-CoV-2 genes are detected), the MS2 spike-in control must be detected.



### Primers and probes targets

ORF1ab gene } SARS-CoV-2 genes  
S gene }  
N gene }  
MS2 } targets MS2 phage spike-in control

limit of detection:  
1 viral genomic copy/ $\mu$ L

