

Table. SARS CoV-2 Test Platforms Available as of May 24, 2020

Test ^a	Method ^b	Samples	Time to result ^c	Workflow	Features	Utility	Patient population
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GeneXpert (Cepheid) 3/29/20	Multiplex Real time RT-PCR	NP, OP, nasal, mid-turbinate	2 hrs	Sample inoculated into single cartridge and placed on instrument	Automated test Simple to train Limited inventory	Rapid result 24/7 capability Ct value available	Prioritized list of indications
Simplexa (Diasorin) 5/24/20	Multiplex Real time RT-PCR	NP, nasal, BAL	2-3 hrs	Samples inoculated into wells in 8-well wheel; 1.5 hrs to run on instrument	Automated Simple to train 1-8 samples/batch	Rapid result Day and evening shifts only	Back up to GeneXpert
Panther (Hologic) 5/14/20	Transcription mediated amplification (TMA)	NP, OP, nasal, mid-turbinate	6 hrs	Samples placed on instrument singly or in batches	Up to 250-300 samples per shift	24/7 capability No Ct value	Inpatient and outpatient
TaqPath (Thermo Fisher) 5/7/20	Multiplex Real time- RT-PCR	NP, OP, nasal, mid-turbinate, NP aspirate, BAL	12-24 hrs	Batched, 50-92 samples	Potential for automation and high throughput High skill level	Large batches Ct value -but not readily obtained	Outpatients
CDC (Lab developed) 3/13/20	Singleplex Real time RT- PCR	NP, OP, nasal, mid-turbinate, BAL, sputum ^d , saliva ^e	24 hrs	Batched, 15-23 samples; 3 PCRs per sample Labor intensive	Gold standard Manual, low throughput High skill level	EUA to test BAL, tracheal aspirate, sputum^d, or saliva^e Ct value available	Inpatient and clinical trials; uncommon sample types
BD Max (Becton Dickinson) 4/14/20	Multiplex Real time RT- PCR	NP, OP	12-24 hrs	Batched, 24 samples	Automated test Limited inventory	Used as backup Small test batches	Limited, for backup only

EUA, Emergency Use Authorization obtained from the FDA to allow testing

“Throughput “refers to the amount of testing completed in a given time period (e.g. 3 tests per hour, versus 50 tests per hour)

a, Due to the volume of testing and need for multiple platforms, tests may be performed by either Virology, Microbiology or Molecular Laboratory staff

b, “Multiplex” indicates that multiple PCRs to detect multiple gene targets are combined in a single vial to simplify workflow, but at the potential loss of sensitivity

c, Time is from arrival in lab, not from sample collection

d, Sputum preferred on retesting if NP or mid-turbinate swab is negative.

e, If sputum negative and suspicion still high, saliva can be tested. Saliva is not recommended for initial screen. NP is preferred.