

COVID-19 (SARS-CoV-2 – Testing)

Comparison of Testing Methods As of April 24, 2020

Test Method	Molecular	Rapid Molecular	Antibody (IgG)	Rapid Antibody (IgG/IgM)
Technical Summary	Detects the SARS-CoV-2 viral RNA	Detects the SARS-CoV-2 viral RNA	Detects IgG antibodies in serum or plasma of patients exposed to the SARS-CoV-2 virus.	Detects IgG and IgM antibodies in serum, plasma, saliva, or nasal swab fluids of patients exposed to the SARS-CoV-2 virus.
Preference for CSH	Yes	No	No	No
Intended Use	Diagnosis, Back-to-Work, Elective Surgery Patients	Diagnosis, Back-to-Work, Elective Surgery Patients	Who was previously infected with the virus within a geographical area? Epidemiologic studies (how far has the virus spread) Not useful for diagnostic purposes.	Who was previously infected with the virus within a geographical area? Epidemiologic studies (how far has the virus spread) Not useful for diagnostic purposes.
Currently Performed in CSH Hospital Laboratories	97%	3%	No testing performed at this time. Testing will begin in the next few weeks.	0%
Test Turn Around Time	45-240 minutes	10-15 minutes	30-240 minutes	10-15 minutes
Likelihood of false negatives (Sensitivity)	Low (this is good)	Higher than desired	Low (this is good)	Higher than desired
Accuracy of Test (Specificity)	High	High	High	Lower than desired (much remains unknown)
Availability of Tests	Limitations meeting demand	Limitations meeting demand	Readily available by end of April	Limitations meeting demand
CSH Approved Testing Manufacturers	Abbott M2000 BD Max BioFire Cepheid Hologic Panther Luminex NG Tag	Abbott ID NOW	Abbott Architect i1000 & i2000 and Ortho Vitros	None
Limitations and Comments	Relies on correct swabbing technique.	Use of VTM, UTM and saline dilutes the virus and may give false negative results	It is NOT clear that the presence of antibodies mean immunity to SARS-CoV-2. It is NOT clear how long antibodies last in a person. Test results do not change the need for full PPE.	Two are FDA approved for use in the US but are not yet available.
Qualitative (positive or negative) Quantitative (a number)	Qualitative	Qualitative	Qualitative and Quantitative	Quantitative