

COVID-19 antigen point-of-care tests performance comparison

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ABSTRACT

COVID-19 antigen (Ag) point-of-care tests (POCT) are relatively inexpensive immunoassays used to identify the current SARS-CoV-2 infection¹. Along with other strategies, serial antigen testing every three days or so can identify early SARS-CoV-2 infection and reduce transmission. Efficient monitoring depends on the frequency and speed of testing, reporting and interventions, but the test performance also contributes to it². In this study, we compared the performance characteristics, sensitivity and specificity, of eight COVID-19 Ag POCT. Results from the Hilab COVID-19 Ag POCT clinical evaluation assay were compared to data sheet information from seven other commercial tests: Abbott Panbio COVID-19 Ag Rapid Test, RapiGEN BIOCREDIT COVID-19 Ag, Healgen Coronavirus Ag Rapid Test, Coris BioConcept COVID-19 Ag Respi-Strip, R-Biopharm RIDA QUICK SARS-CoV-2 Antigen, Nal von minden NADAL COVID-19 Ag Test and Roche SARS-CoV-2 Rapid Antigen Test. The Hilab test presented a very high performance in this comparative analysis (TABLE 1).

TABLE 1: COVID-19 Ag POCT performance comparison

POCT	Hilab	Abbott	RapiGEN	Healgen	Coris	R-Biopharm	Nal von minden	Roche
Sample N°	144	508	283	237	189	101	284	426
Relative Sensitivity	>99% (90-100%)	98% (93-100%)	93% (84-97%)	97% (92-99%)	91% (75-98%)	95% (84-99%)	98% (93-99%)	96% (91-99%)
Relative Specificity	>99% (95-100%)	>99% (99-100%)	>99% (96-100%)	>99% (97-100%)	>99% (96-100%)	>99% (94-100%)	>99% (98-100%)	>99% (95-100%)

Note: 95% Confidence Interval. Source: Authors (2021).

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