

## Certificate of Analysis


Product name	AzureSeq One-Step Universal RT-qPCR Kit SARS-CoV-2, Wet Format 200 Reactions
Reference number	AzureSeq-200
LOT number	OMX3092 (20B31007, 21B30009, 21B32002, 21R05007, 21B33004, 21U6010)
Kit Assembling Date	2022-02-16
Expiration date	2022-09-16

## Components

Product Code	Product name	Pass/Fail*
OA-ITMP-MM-100	2X InhibiTaq Multiplex HotStart MasterMix	Pass
OA-RT-200	RTScript Reverse Transcriptase, 200U/ $\mu$ L	Pass
OA-CPPM-100uL	CoVi Primer/Probe Mix 3	Pass
OA-NFW-350uL	Nuclease Free Water	Pass
OA-CVNC-150	CoVi Negative Control	Pass
OA-CVPC-150	CoVi Positive Control	Pass

\*for acceptance criteria see second page.

### Authorization for release

Name	<b>B Kosiba</b>	Function	Quality Engineer
Signature		Sign date	2022-02-17

## Acceptance Criteria

Component	Assay name / Specification	Passing Result	Result
OA-ITMP-MM-100	<b>N1, N2 and RNase P qPCR amplification</b> ITMP is tested for performance in multiplex qPCR reaction using primers specific to the SARS-Cov2 N1/N2 EUA Assays, and RNase P with 100 copies of synthetic RNA and 1 ng of UHRR. Successful amplification of synthetic RNA < 40 Ct and UHRR < 30 Ct	Pass	Pass
	<b>Unspecific dsDNA nucleases</b> HindIII digested Lambda DNA and dsRNA are incubated with 2x InhibiTag Multiplex Master at a concentration of 1x at 37°C for 1 hours. No detectable degradation of DNA via agarose gel electrophoresis.	Pass	Pass
	<b>N1/N2 EUA &amp; RNase P Amplicon Contamination</b> Components are used in multiplex qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays and RNase P. No amplification < 40 Ct (<2%) is detectable	Pass	Pass
	<b>Shelf life</b>	≥ 12 months	≥ 12 months
OA-RT-200	<b>DNase and RNase Activity</b> 100U of RTScript RT is tested for nuclease degradation in reactions containing a DNA or RNA substrate. After incubation for 1 hour at 37°C there is no detectable degradation of DNA or RNA substrate as determined by agarose gel electrophoresis. MS-II RNA is incubated with 200U of RTScript Reverse Transcriptase at 37°C for 1 hour. No degradation is observed by gel electrophoresis.	Pass	Pass
	<b>RNase P, N1 and N2 COVID Contamination Assay</b> RTScript Reverse Transcriptase is used as the template in RT-qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays, and RNase P. 95 NTCs and 1 positive control are run each assay.	≤ 1 of 95 NTC showing amplification before 40 Ct 1/1 positive control amplifies before 40 Ct	Pass
	<b>E. coli DNA Contamination Assay</b> Not detectable before 40 cycles in qPCR Assay for E-coli DNA in presence of 100 Units of RTScript Reserve Transcriptase	Pass	Pass
	<b>Nicking Activity Assay</b> pBR322 supercoiled plasmid DNA is incubated with 100 Units of RTScript at 37°C for 4 hours. No detectable nicking activity as determined by agarose gel electrophoresis.	Pass	Pass
	<b>Activity Assay</b> One unit is defined as the amount of enzyme required to catalyse the incorporation of 1 nmol of dTTP into an acid-insoluble form in 10 minutes at 37°C. The test result is 200U/μL ± 15%	Pass	Pass
	<b>Performance Test</b> TScript Reverse Transcriptase is tested for performance in a 20 μL RT-qPCR assay. Ct values are within 1 Ct of control enzyme for each serial dilution of template	Pass	Pass
	<b>Single Stranded Exonuclease Assay</b> ssDNS probes are incubated with 100U of RTScript Reverse Transcriptase for 4 hours at 37°C. Results observed via qPCR analysis.	Pass	Pass
	<b>Human gDNA Contamination Assay</b> 100U of RTScript Reverse Transcriptase is used as the template in qPCR reactions using primers specific to Human gDNA. No Human gDNA is detected before 45 cycles.	Pass	Pass
	<b>Protein Purity</b> ≥95% as determined by SDS-PAGE		Pass
	<b>Shelf life</b>	≥ 12 months	≥ 12 months
OA-CPPM-100uL	<b>N1, N2 and RNase P qPCR amplification</b> CPPM is tested for performance in multiplex qPCR reaction using primers specific to the SARS-Cov2 N1/N2 EUA Assays, and RNase P with 100 copies of synthetic RNA and 1 ng of UHRR. Successful amplification of synthetic RNA < 40 Ct and UHRR < 30 Ct.	Pass	Pass
	<b>ssRNase</b> Single stranded RNA is incubated with CPPM at 37°C for 2 hours. No degradation is observed by gel electrophoresis.	Pass	Pass
	<b>Unspecific Endonucleases</b> dsEndonuclease: HindIII digested Lambda-DNA is incubated with CPPM at 37°C for 1 hour. No degradation is observed by gel electrophoresis.	Pass	Pass
	<b>N1/N2 EUA &amp; RNase P Amplicon Contamination</b> Components are used in multiplex qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays and RNase P. No amplification <40 Ct (<2%) is detectable	Pass	Pass
OA-NFW-350uL	<b>N1, N2 &amp; RNase P qPCR Amplification</b>	≤1 of NTC showing amplification before 45 Ct	Pass

	<p>Nuclease Free Water is tested for performance in multiplex qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays, and RNase P with 100 copies of synthetic RNA and 1ng of UHRR. Successful amplification of synthetic RNA &lt;40ct and UHRR &lt;30ct</p> <p><b>TB Performance and Contamination</b>          Nuclease Free Water is used in a qPCR reaction to amplify DNA from Mycobacterium tuberculosis complex (TB). Nuclease Free Water is also used as NTC and tested for TB and internal amplification control plasmid (IAC) contamination</p>	<p>4/4 positive controls amplification the specified Ct range</p>	
	<p><b>ssRNase</b>          Single stranded RNA is incubated with CPPM at 37C for 2 hours. No degradation is observed by gel electrophoresis.</p> <p><b>Unspecific dsEndonucleases</b>          dsEndonuclease: HindIII digested Lambda-DNA is incubated with the components at 37°C for 1 hour. No degradation is observed by gel electrophoresis.</p> <p><b>N1, N2 EUA &amp; RNase P Amplicon Contamination</b>          NFW is used in multiplex qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays and RNase P. No amplification &lt; 40 Ct (&lt;2%) is detectable.</p> <p><b>Influenza A/B Amplicon Contamination</b>          NFW is used in multiplex qPCR reactions using primers specific to FluA/B template. No amplification &lt; 40 Ct is detectable</p>	<p>TBC Positive control: 8/8          IAC Positive Control ≥47/48          Positive ≤ 35 Ct          TBC NTC: ≤ 1/88 positive ≤ 40 Ct          IAC NTC: 1/40 positive ≤ 40 Ct</p>	<p>Pass</p>
	<p><b>ssRNase</b>          Single stranded RNA is incubated with CPPM at 37C for 2 hours. No degradation is observed by gel electrophoresis.</p> <p><b>Unspecific dsEndonucleases</b>          dsEndonuclease: HindIII digested Lambda-DNA is incubated with the components at 37°C for 1 hour. No degradation is observed by gel electrophoresis.</p> <p><b>N1, N2 EUA &amp; RNase P Amplicon Contamination</b>          NFW is used in multiplex qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays and RNase P. No amplification &lt; 40 Ct (&lt;2%) is detectable.</p> <p><b>Influenza A/B Amplicon Contamination</b>          NFW is used in multiplex qPCR reactions using primers specific to FluA/B template. No amplification &lt; 40 Ct is detectable</p>	<p>Pass</p>	<p>Pass</p>
<b>OA-CVPC-150</b>	<p><b>qPCR Amplification</b>          CoVi Positive Control is tested for performance in multiplex qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays, and RNase P with 100 copies of synthetic RNA and 1ng of UHRR. Successful amplification of synthetic RNA &lt;40 ct and UHRR &lt;30ct.</p>	<p>Pass</p>	<p>Pass</p>
	<p><b>qPCR Amplification</b>          CoVi Negative Control is tested for performance in multiplex qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays, and RNase P with 100 copies of synthetic RNA and 1ng of UHRR. Successful amplification of synthetic RNA &lt;40 ct and UHRR &lt;30ct.</p> <p><b>ssRNase</b>          Single Stranded RNA is incubated with CoVi Negative Control at 37°C for 2 hour. No degradation is observed.</p> <p><b>Unspecific Endonucleases</b>          dsEndonuclease: HindIII digested Lambda-DNA is incubated with CoVi Negative Control at 37°C for 1 hour. No degradation is observed.</p> <p><b>N1/N2 EU Amplicon Cotamination:</b>          CoVi Negative Control is used in multilex qPCR reactions using primers specific to the SAR-Cov2 N1/N2 EUA Assays and RNase P. No amplification &lt;40ct (&lt;2%) is detectable.</p>	<p>Pass</p>	<p>Pass</p>
<b>O-CVNC-150</b>	<p><b>qPCR Amplification</b>          CoVi Positive Control is tested for performance in multiplex qPCR reactions using primers specific to the SARS-Cov2 N1/N2 EUA Assays, and RNase P with 100 copies of synthetic RNA and 1ng of UHRR. Successful amplification of synthetic RNA &lt;40 ct and UHRR &lt;30ct.</p>	<p>Pass</p>	<p>Pass</p>
	<p><b>ssRNase</b>          Single Stranded RNA is incubated with CoVi Negative Control at 37°C for 2 hour. No degradation is observed.</p> <p><b>Unspecific Endonucleases</b>          dsEndonuclease: HindIII digested Lambda-DNA is incubated with CoVi Negative Control at 37°C for 1 hour. No degradation is observed.</p> <p><b>N1/N2 EU Amplicon Cotamination:</b>          CoVi Negative Control is used in multilex qPCR reactions using primers specific to the SAR-Cov2 N1/N2 EUA Assays and RNase P. No amplification &lt;40ct (&lt;2%) is detectable.</p>	<p>Pass</p>	<p>Pass</p>