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New England Biolabs
Product Specification

Product Name:	*SARS-CoV-2 LAMP Primer Mix (N/E)*
Catalog #:	*S1883S*
Concentration:	*10X Concentrate*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Composition (1X):	*Proprietary*
Specification Version:	*PS-S1883S v1.0*
Effective Date:	*11 Feb 2022*

Assay Name/Specification (minimum release criteria)
Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 µl of SARS-CoV-2 LAMP Primer Mix (N/E) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.
Functional Testing (RT-LAMP, SARS-CoV-2) - A 25 µl reaction in 1X WarmStart® LAMP Master Mix with UDG in the presence of LAMP Fluorescent Dye and 1X SARS-CoV-2 LAMP Primer Mix (N/E) containing 500 copies of synthetic SARS-CoV-2 RNA results in a threshold time of ≤ 20 minutes as determined by fluorescent detection. Reactions that lack SARS-CoV-2 RNA template remain negative over a 30 minute incubation at 65°C.
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 5 µl of SARS-CoV-2 LAMP Primer Mix (N/E) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.
Phosphatase Activity (pNPP) - A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM $MgCl_2$ containing 2.5 mM *p*-Nitrophenyl Phosphate (pNPP) and a minimum of 20 µl of SARS-CoV-2 LAMP Primer Mix (N/E) incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.
RNase Activity (Extended Digestion) - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of SARS-CoV-2 LAMP Primer Mix (N/E) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.

One or more products referenced in this document may be covered by a 3rd-party trademark.
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Date 11 Feb 2022

Derek Robinson
Director, Quality Control

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