NEW ENGLAND BioLabs® Inc.

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New England Biolabs
Product Specification

Product Name:	*LAMP Fluorescent Dye*
Catalog #:	*B1700S*
Concentration:	*50X Concentrate*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Composition (1X):	*Proprietary*
Specification Version:	*PS-B1700S v1.0*
Effective Date:	*02 Dec 2020*

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 2 µl of LAMP Fluorescent Dye incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Functional Testing (LAMP, Master Mix) - A 25 µl reaction with 1X WarmStart® LAMP Master Mix in the presence of 1X LAMP Primers containing 10 ng genomic DNA and 1X LAMP fluorescent dye results in a threshold time of ≤ 20 minutes as determined by fluorescent detection.

Functional Testing (RT-LAMP, Master Mix) - A 25 µl reaction with 1X WarmStart® LAMP Master Mix in the presence of 1X LAMP Primers containing 10 ng of genomic RNA and 1X LAMP fluorescent dye results in a threshold time of ≤ 20 minutes as determined by fluorescent detection.

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 2 µl of LAMP Fluorescent Dye incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

qPCR DNA Contamination (E. coli Genomic) - A minimum of 1 µl of LAMP Fluorescent Dye is screened for the presence of *E. coli* genomic DNA using SYBR® Green qPCR with primers specific for the *E. coli* 16S rRNA locus. Results are quantified using a standard curve generated from purified *E. coli* genomic DNA. The measured level of *E. coli* genomic DNA contamination is ≤ 1 *E. coli* genome.

RNase Activity Assay (4 Hour 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 LAMP Fluorescent Dye is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.

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Date 02 Dec 2020

Derek Robinson
Director, Quality Control