

New England Biolabs Product Specification

Product Name: Luna[®] Probe One-Step RT-qPCR 4X Mix with UDG
Catalog #: M3019E
Concentration: 4X Concentrate
Shelf Life: 12 months
Storage Temp: -20°C
Composition (1X): Proprietary
Specification Version: PS-M3019E v1.0
Effective Date: 23 Sep 2020

Assay Name/Specification (minimum release criteria)

Functional Testing (One-Step RT-qPCR) - Luna[®] Probe One-Step RT-qPCR 4X Mix with UDG is functionally tested in One-Step RT-qPCR with human RNA template, resulting in a standard curve with a calculated qPCR efficiency of 90-110%, and a dynamic range of 8 orders of magnitude.

Non-Specific DNase Activity (16 hour, Buffer) - A 50 µl reaction in 1X Luna[®] Probe One-Step RT-qPCR Mix with UDG containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA 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 Luna[®] Probe One-Step RT-qPCR 4X Mix with UDG 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 Luna[®] Probe One-Step RT-qPCR 4X Mix with UDG 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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