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New England Biolabs
Product Specification

Product Name:	*Luna® Probe One-Step RT-qPCR 4X Mix with UDG*
Catalog #:	*M3019S/L/X*
Concentration:	*4X Concentrate*
Shelf Life:	*12 months*
Storage Temp:	*-20°C*
Composition (1X):	*Proprietary*
Specification Version:	*PS-M3019S/L/X 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.

Date 23 Sep 2020

Derek Robinson
Director, Quality Control