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New England Biolabs
Product Specification

Product Name:	*Luna® Universal qPCR Master Mix*
Catalog #:	*M3003S/L/X*
Concentration:	*2X Concentrate*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Composition (1X):	*Proprietary*
Specification Version:	*PS-M3003S/L/G/X/E v2.0*
Effective Date:	*12 Feb 2020*

Assay Name/Specification (minimum release criteria)
Functional Testing (qPCR) - Luna® Universal qPCR Master Mix is functionally tested in qPCR with human cDNA template, resulting in a standard curve with a calculated qPCR efficiency of 90-110%, and a dynamic range of 5 orders of magnitude.
Non-Specific DNase Activity (16 hour, Master Mix) - A 50 µl reaction in 1X Luna® Universal qPCR Master Mix 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® Universal qPCR Master Mix 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® Universal qPCR Master Mix 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 12 Feb 2020

Derek Robinson
Director, Quality Control