

New England Biolabs Product Specification

Product Name: Q5[®] Blood Direct 2X Master Mix
Catalog #: M0500S/L/G
Concentration: 2X Concentrate
Shelf Life: 24 months
Storage Temp: -20°C
Composition (1X): Proprietary
Specification Version: PS-M0500S/L/G v1.0
Effective Date: 05 Jul 2022

Assay Name/Specification (minimum release criteria)

Non-Specific DNase Activity (16 hour, Buffer) - A 50 µl reaction in 1X Q5[®] Blood Direct 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.

PCR Amplification (0.5 kb Whole Blood DNA) - A 20 µl reaction in 1X Q5[®] Blood Direct Master Mix and 0.5 µM primers containing 10% whole blood treated with sodium heparin, sodium EDTA, potassium EDTA or sodium citrate for 35 cycles of PCR amplification results in the expected 0.5 kb product.

PCR Amplification (4.8 kb Whole Blood DNA) - A 20 µl reaction in 1X Q5[®] Blood Direct Master Mix and 0.5 µM primers containing 15% whole blood treated with potassium EDTA for 35 cycles of PCR amplification results in the expected 4.8 kb product.

qPCR DNA Contamination (*E. coli* Genomic) - A minimum of 1 µl of Q5[®] Blood Direct 2X 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.

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Date 05 Jul 2022

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Director, Quality Control

