

## New England Biolabs Certificate of Analysis

**Product Name:** Q5® Blood Direct 2X Master Mix  
**Catalog Number:** M0500S  
**Concentration:** 2 X Concentrate  
**Packaging Lot Number:** 10262862  
**Expiration Date:** 07/2026  
**Storage Temperature:** -20°C  
**Specification Version:** PS-M0500S/L/G v1.0  
**Composition (1X):** Proprietary

Q5® Blood Direct 2X Master Mix Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0500SVIAL	Q5® Blood Direct 2X Master Mix	10250769	Pass

Assay Name/Specification	Lot # 10262862
<b>Non-Specific DNase Activity (16 hour, Buffer)</b> 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.	<b>Pass</b>
<b>PCR Amplification (0.5 kb Whole Blood DNA)</b> 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.	<b>Pass</b>
<b>PCR Amplification (4.8 kb Whole Blood DNA)</b> 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.	<b>Pass</b>
<b>qPCR DNA Contamination (E. coli Genomic)</b> 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.	<b>Pass</b>

This product has been tested and shown to be in compliance with all specifications.

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Trinh Nguyen  
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13 Aug 2024



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Michael Tonello  
Packaging Quality Control Inspector  
10 Oct 2024