

New England Biolabs Certificate of Analysis

Product Name: Quick-Load® Taq 2X Master Mix
Catalog Number: M0271L
Concentration: 2 X Concentrate
Lot Number: 10023170
Expiration Date: 06/2020
Storage Temperature: -20°C
Specification Version: PS-M0271S/L v1.0
Composition (1X): 10 mM Tris-HCl (pH 8.6 @ 25°C), 50 mM KCl, 1.5 mM MgCl₂, 0.2 mM dATP, 0.2 mM dCTP, 0.2 mM dGTP, 0.2 mM dTTP, 5 % Glycerol, 0.08 % IGEPAL® CA-630, 0.05 % Tween® 20, 0.024 % Orange G, 0.0025 % Xylene cyanol, 33 units/ml Taq DNA Polymerase

Quick-Load® Taq 2X Master Mix Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0271SVIAL	Quick-Load® Taq 2X Master Mix	10009923	Pass
B9021SVIAL	Magnesium Chloride (MgCl ₂) Solution	10020022	Pass

Assay Name/Specification	Lot # 10023170
Endonuclease Activity (Nicking) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 20 units of Taq DNA Polymerase incubated for 4 hours at either 37°C or 75°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X Quick-Load® Taq Master Mix containing 1 µg of T3 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.	Pass
PCR Amplification (5 kb Lambda, Master Mix) A 25 µl reaction in 1X Quick-Load® Taq Master Mix and 0.2 µM primers containing 5 ng Lambda DNA for 25 cycles of PCR amplification results in the expected 5 kb product.	Pass
Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 100 units of Taq DNA Polymerase	Pass

Assay Name/Specification	Lot # 10023170
<p>incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	
<p>Protein Purity Assay (SDS-PAGE) Taq DNA Polymerase is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 5 units of Taq DNA Polymerase 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.</p>	Pass
<p>RNase Activity (Extended 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 Quick-Load® Taq 2X 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.</p>	Pass
<p>Single Stranded DNase Activity (FAM-Labeled Oligo) A 50 µl reaction in ThermoPol® Reaction Buffer containing a 10 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 25 units of Taq DNA Polymerase incubated for 30 minutes at either 37°C or 75°C yields <10% degradation as determined by capillary electrophoresis.</p>	Pass

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



Lynne Apone
Production Scientist
11 Jul 2018



Michael Tonello
Packaging Quality Control Inspector
27 Sep 2018