

New England Biolabs Certificate of Analysis

Product Name: Standard Taq (Mg-free) Reaction Buffer Pack
 Catalog Number: B9015S
 Concentration: 10 X Concentrate
 Lot Number: 10030139
 Expiration Date: 03/2022
 Storage Temperature: -20°C
 Specification Version: PS-B9015S v1.0
 Composition (1X): 10 mM Tris-HCl, 50 mM KCl, (pH 8.3 @ 25°C)

| Standard Taq (Mg-free) Reaction Buffer Pack Component List | | | |
|--|--|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| B9021SVIAL | Magnesium Chloride (MgCl ₂) Solution | 10020022 | Pass |
| B9015SVIAL | Standard Taq (Mg-free) Reaction Buffer Pack | 0021703 | Pass |

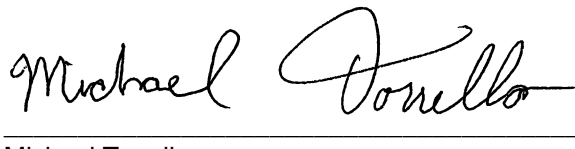
| Assay Name/Specification | Lot # 10030139 |
|--|----------------|
| <p>Endonuclease Activity (Nicking, Mg-Free Buffer) A 50 µl reaction in 2X Standard Taq (Mg-free) Reaction Buffer and 3 mM MgCl₂ containing 1 µg of supercoiled PhiX174 DNA incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | Pass |
| <p>Non-Specific DNase Activity (16 hour, Mg-Free Buffer) A 50 µl reaction in 2X Standard Taq (Mg-free) Reaction Buffer and 3 mM MgCl₂ 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.</p> | Pass |
| <p>PCR Amplification (5 kb Lambda DNA, Mg-Free Buffer) A 50 µl reaction in Standard Taq (Mg-free) Reaction Buffer and 1.5 mM MgCl₂ in the presence of 200 µM dNTPs and 0.2 µM primers containing 5 ng Lambda DNA with 1.25 units of Taq DNA Polymerase for 25 cycles of PCR amplification results in the expected 5 kb product.</p> | Pass |
| <p>pH (buffers/solutions) The pH of 10X Standard Taq (Mg-free) Reaction Buffer is between pH 8.2 and 8.4 at 25°C.</p> | Pass |
| <p>Phosphatase Activity (pNPP, Buffer)</p> | Pass |

| Assay Name/Specification | Lot # 10030139 |
|---|----------------|
| <p>A 200 µl reaction in 1M Diethanolamine @ pH 9.8 and 0.5 mM MgCl₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 40 µl Standard Taq (Mg-free) Reaction Buffer incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p> | |
| <p>qPCR DNA Contamination (E. coli Genomic, Buffer) A minimum of 1 µl of Standard Taq (Mg-free) Reaction Buffer 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 Standard Taq (Mg-free) Reaction Buffer is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p> | Pass |

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



Tony Spear-Alfonso
Production Scientist
28 Aug 2018



Michael Tonello
Packaging Quality Control Inspector
19 Nov 2018