

New England Biolabs Certificate of Analysis

Product Name: NEBuffer™ 1
Catalog Number: B7001S
Concentration: 10 X Concentrate
Packaging Lot Number: 10249641
Expiration Date: 10/2025
Storage Temperature: -20°C
Specification Version: PS-B7001S v1.0
Composition (1X): 10 mM Bis-Tris-Propane-HCl, 10 mM MgCl₂, 1 mM DTT, (pH 7.0 @ 25°C)

NEBuffer™ 1 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B7001SVIAL	NEBuffer™ 1	10167590	Pass

Assay Name/Specification	Lot # 10249641
Conductivity (buffers/solutions) The conductivity of 10X NEBuffer 1 is between 20 and 30 mS at 25°C.	Pass
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X NEBuffer 1 containing 1 µg of supercoiled PhiX174 RF I DNA incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Functional Testing (Restriction Digest, BSA, Buffer) A 50 µl reaction in 1X NEBuffer 1 plus 100 µg/ml Bovine Serum Albumin containing 1 µg of Lambda-HindIII DNA and 1 unit of SmaI incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.	Pass
Functional Testing (Restriction Digest, BSA, Buffer) A 50 µl reaction in 1X NEBuffer 1 plus 100 µg/ml Bovine Serum Albumin containing 1 µg of pXba DNA and 1 unit of KpnI incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.	Pass
Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X NEBuffer 1 containing 1 µg of HaeIII digested PhiX174 RF I 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

Assay Name/Specification	Lot # 10249641
<p>RNase Activity (Buffer) A 10 µl reaction in 1X NEBuffer 1 containing 40 ng of a 300 base single-stranded RNA is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by fluorescent detection.</p>	Pass
<p>pH (buffers/solutions) The pH of 10X NEBuffer 1 is between pH 6.9 and 7.1 at 25°C.</p>	Pass

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

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Nancy Considine
Production Scientist
27 Oct 2022



Josh Hersey
Packaging Quality Control Inspector
25 Jul 2024