

New England Biolabs Certificate of Analysis

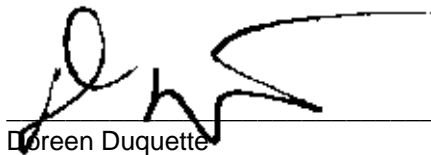
Product Name: NEBuffer™ 4
Catalog Number: B7004S
Concentration: 10 X Concentrate
Lot Number: 10052769
Expiration Date: 06/2022
Storage Temperature: -20°C
Specification Version: PS-B7004S v1.0
Composition (1X): 50 mM Potassium Acetate , 20 mM Tris-acetate, 10 mM Magnesium Acetate, 1 mM DTT, (pH 7.9 @ 25°C)

NEBuffer™ 4 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B7004SVIAL	NEBuffer™ 4	10043904	Pass

Assay Name/Specification	Lot # 10052769
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X NEBuffer 4 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.	Pass
Functional Testing (Restriction Digest, BSA, Buffer) A 50 µl reaction in 1X NEBuffer 4 plus 100 µg/ml Bovine Serum Albumin containing 1 µg of Lambda DNA and 1 unit of MscI 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 4 plus 100 µg/ml Bovine Serum Albumin containing 1 µg of Lambda dam- DNA and 1 unit of ClaI 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 4 containing 1 µg of PhiX174-HaeIII 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
Conductivity (buffers/solutions)	Pass

Assay Name/Specification	Lot # 10052769
The conductivity of 10X NEBuffer 4 is between 36 and 54 mS at 25°C.	
<p>pH (buffers/solutions) The pH of 10X NEBuffer 4 is between pH 7.8 and 8.0 at 25°C.</p>	Pass
<p>RNase Activity (Buffer) A 10 µl reaction in 1X NEBuffer 4 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

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



Doreen Duquette
Production Scientist
06 Jun 2019



Michael Tonello
Packaging Quality Control Inspector
06 Sep 2019