

New England Biolabs Certificate of Analysis

Product Name: NEBuffer™ 3
Catalog Number: B7003S
Concentration: 10 X Concentrate
Packaging Lot Number: 10163404
Expiration Date: 12/2025
Storage Temperature: -20°C
Specification Version: PS-B7003S v1.0
Composition (1X): 100 mM NaCl, 50 mM Tris-HCl, 10 mM MgCl₂, 1 mM DTT, (pH 7.9 @ 25°C)

NEBuffer™ 3 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B7003SVIAL	NEBuffer™ 3	10173669	Pass

Assay Name/Specification	Lot # 10163404
Conductivity (buffers/solutions) The conductivity of 10X NEBuffer 3 is between 85 and 115 mS at 25°C.	Pass
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X NEBuffer 3 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 3 plus 100 µg/ml Bovine Serum Albumin containing 1 µg of pBC4 DNA and 1 unit of NotI 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 3 plus 100 µg/ml Bovine Serum Albumin containing 1 µg of Lambda DNA and 1 unit of AseI 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 3 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

Assay Name/Specification	Lot # 10163404
RNase Activity (Buffer) A 10 µl reaction in 1X NEBuffer 3 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.	Pass
pH (buffers/solutions) The pH of 10X NEBuffer 3 is between pH 7.8 and 8.0 at 25°C.	Pass

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

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Nancy Considine
Production Scientist
15 Dec 2022



Michael Tonello
Packaging Quality Control Inspector
19 Jul 2023