

New England Biolabs Certificate of Analysis

Product Name: NEBuffer™ 2
Catalog Number: B7002S
Concentration: 10 X Concentrate
Packaging Lot Number: 10221475
Expiration Date: 10/2026
Storage Temperature: -20°C
Specification Version: PS-B7002S v1.0
Composition (1X): 50 mM NaCl, 10 mM Tris-HCl, 10 mM MgCl₂, 1 mM DTT, (pH 7.9 @ 25°C)

| NEBuffer™ 2 Component List | | | |
|----------------------------|-----------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| B7002SVIAL | NEBuffer™ 2 | 10204841 | Pass |

| Assay Name/Specification | Lot # 10221475 |
|--|----------------|
| Conductivity (buffers/solutions) The conductivity of 10X NEBuffer 2 is between 52 and 78 mS/cm at 25°C. | Pass |
| Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X NEBuffer 2 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 2 plus 100 µg/ml Bovine Serum Albumin containing 1 µg of Lambda DNA and 1 unit of SphI 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 2 plus 100 µg/ml Bovine Serum Albumin containing 1 µg of Lambda DNA and 1 unit of HindIII 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 2 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 # 10221475 |
|---|----------------|
| <p>RNase Activity (Buffer) A 10 µl reaction in 1X NEBuffer 2 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 2 is between pH 7.8 and 8.0 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
24 Oct 2023



Michael Tonello
Packaging Quality Control Inspector
01 Feb 2024