NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*NEBuffer™ 2*
Catalog Number:	*B7002S*
Concentration:	*10 X Concentrate*
Packaging Lot Number:	*10214204*
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 # 10214204**
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 HindIII incubated for 1 hour at 37ºC 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 SphI incubated for 1 hour at 37ºC 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 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

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Assay Name/Specification	Lot # 10214204
RNase Activity (Buffer) A 10 µl reaction in 1X NEBuffer 2 containing 40 ng of a 300 base single-stranded RNA is incubated at 37ºC. 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 2 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.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Nancy Considine
Production Scientist
24 Oct 2023

Josh Hersey
Packaging Quality Control Inspector
26 Oct 2023