

## New England Biolabs Certificate of Analysis

**Product Name:** *Diluent B*  
**Catalog Number:** *B8002S*  
**Concentration:** *1 X Concentrate*  
**Packaging Lot Number:** *10127455*  
**Expiration Date:** *11/2024*  
**Storage Temperature:** *-20°C*  
**Specification Version:** *PS-B8002S v1.0*  
**Composition (1X):** *300 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 500 µg/ml BSA, (pH 7.4 @ 25°C)*

Diluent B Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B8002SVIAL	Diluent B	10127454	Pass

Assay Name/Specification	Lot # 10127455
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of PhiX174-HaeIII DNA and a minimum of 10 µl of Diluent B incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>pH (buffers/solutions)</b> The pH of 1X Diluent B is between pH 7.3 and 7.5 at 25°C.	<b>Pass</b>
<b>RNase Activity (Extended Digestion)</b> A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Diluent B is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	<b>Pass</b>
<b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 1 µl of Diluent B is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.	<b>Pass</b>
<b>Endonuclease Activity (Nicking)</b>	<b>Pass</b>

Assay Name/Specification	Lot # 10127455
A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 µl of Diluent B incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	

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](http://www.neb.com/trademarks) for additional information.



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Michael Dalton  
Production Scientist  
19 Nov 2021



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Michael Tonello  
Packaging Quality Control Inspector  
19 Nov 2021