NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*Diluent B*
Catalog Number:	*B8002S*
Concentration:	*1 X Concentrate*
Packaging Lot Number:	*10166123*
Expiration Date:	*09/2025*
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	10153871	**Pass**

Assay Name/Specification	**Lot # 10166123**
RNase Activity (Extended Digestion) 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 37ºC. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**
Non-Specific DNase Activity (16 Hour) 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 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
pH (buffers/solutions) The pH of 1X Diluent B is between pH 7.3 and 7.5 at 25°C.	**Pass**
Endonuclease Activity (Nicking) 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 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
qPCR DNA Contamination (E. coli Genomic) A minimum of 1 µl of Diluent B is screened for the presence of E. coli genomic DNA	**Pass**

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Assay Name/Specification	Lot # 10166123
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.	

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

Nancy Considine
Production Scientist
06 Oct 2022

Josh Hersey
Packaging Quality Control Inspector
07 Oct 2022