

## New England Biolabs Certificate of Analysis

**Product Name:** Diluent A  
**Catalog Number:** B8001S  
**Concentration:** 1 X Concentrate  
**Packaging Lot Number:** 10140297  
**Expiration Date:** 03/2025  
**Storage Temperature:** -20°C  
**Specification Version:** PS-B8001S v1.0  
**Composition (1X):** 10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 200 µg/ml BSA , 50 % Glycerol, (pH 7.4 @ 25°C)

Diluent A Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B8001SVIAL	Diluent A	10140296	Pass

Assay Name/Specification	Lot # 10140297
<b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 1 µl of Diluent A 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.	Pass
<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 A 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.	Pass
<b>pH (buffers/solutions)</b> The pH of 1X Diluent A is between pH 7.3 and 7.5 at 25°C.	Pass
<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 A incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Endonuclease Activity (Nicking)</b>	Pass

Assay Name/Specification	Lot # 10140297
A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 µl of Diluent A 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.

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Production Scientist  
30 Mar 2022



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Josh Hersey  
Packaging Quality Control Inspector  
30 Mar 2022