Product Name: Diluent A
Catalog Number: B8001S
Concentration: 1 X Concentrate
Lot Number: 10042753
Expiration Date: 04/2022
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)

<table>
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<th>NEB Part Number</th>
<th>Component Description</th>
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<th>Individual QC Result</th>
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<td>Diluent A</td>
<td>10042697</td>
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### Assay Name/Specification

#### 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 A incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

#### 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 A incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

#### 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 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.

#### pH (buffers/solutions)
The pH of 1X Diluent A is between pH 7.3 and 7.5 at 25°C.

#### qPCR DNA Contamination (E. coli Genomic)
A minimum of 1 µl of Diluent A is screened for the presence of E. coli genomic DNA

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Assay Name/Specification

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 $\leq 1$ E. coli genome.

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

Doreen Duquette
Production Scientist
15 Apr 2019

Michael Tonello
Packaging Quality Control Inspector
18 Apr 2019