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New England Biolabs
Product Specification

Product Name:	*Diluent C (with rAlbumin)*
Catalog #:	*B8534S*
Concentration:	*1X Concentrate*
Shelf Life:	*36 months*
Storage Temp:	*-20°C*
Composition (1X):	*10 mM Tris-HCl, 250 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.15 % Triton X-100, 200 µg/ml rAlbumin, (pH 7.4 @ 25°C)*
Specification Version:	*PS-B8534S v1.0*
Effective Date:	*11 Aug 2023*

Assay Name/Specification (minimum release criteria)
Endonuclease Activity (Nicking) - A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 µl of Diluent C (with rAlbumin) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of PhiX174-HaeIII DNA and a minimum of 10 µl of Diluent C (with rAlbumin) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.
pH (buffers/solutions) - The pH of 1X Diluent C (with rAlbumin) is between pH 7.3 and 7.5 at 25°C.
qPCR DNA Contamination (*E. coli* Genomic) - A minimum of 1 µl of Diluent C (with rAlbumin) 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.
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 C (with rAlbumin) 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.

Lauren Brown

Date 11 Aug 2023

Lauren Brown
Quality Approver