

New England Biolabs Product Specification

Product Name:	<i>Endonuclease III (Nth)</i>
Catalog #:	M0268S
Concentration:	10,000 units/ml
Unit Definition:	One unit is defined as the amount of enzyme required to cleave 1 pmol of a 34 mer oligonucleotide duplex containing a single AP site in a total reaction volume of 10 µl in 1 hour at 37°C in 1X Endonuclease III Reaction Buffer containing 10 pmol of fluorescently labeled oligonucleotide duplex.
Shelf Life:	24 months
Storage Temp:	-20°C
Storage Conditions:	10 mM Tris-HCl, 250 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 200 µg/ml BSA, (pH 7.4 @ 25°C)
Specification Version:	PS-M0268S v2.0
Effective Date:	27 Apr 2021

Assay Name/Specification (minimum release criteria)

Protein Purity Assay (SDS-PAGE) - Endonuclease III (Nth) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

qPCR DNA Contamination (E. coli Genomic) - A minimum of 1 µl of Endonuclease III (Nth) 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.

Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in NEBuffer 1 containing 1 µg of a mixture of single and double-stranded [³H] *E. coli* DNA and a minimum of 10 units of Endonuclease III (Nth) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in NEBuffer 1 containing 1 µg of Lambda-HindIII DNA and a minimum of 30 units of Endonuclease III (Nth) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

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