

New England Biolabs Certificate of Analysis

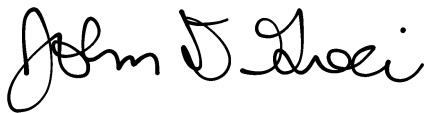
Product Name: Exonuclease VII
Catalog Number: M0379S
Concentration: 10,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will catalyze the release of 1 nmol of acid-soluble nucleotide in a total reaction volume of 50 µl in 30 minutes at 37°C.
Lot Number: 10022780
Expiration Date: 09/2020
Storage Temperature: -20°C
Storage Conditions: 100 mM NaCl, 50 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.1 % Triton®X-100, (pH 7.5 @ 25°C)
Specification Version: PS-M0379S/L v1.0

Exonuclease VII Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0379SVIAL	Exonuclease VII	10022778	Pass
B0379SVIAL	Exonuclease VII Reaction Buffer	0011710	Pass

Assay Name/Specification	Lot # 10022780
Endonuclease Activity (Circular Single Stranded DNA) A 50 µl reaction in NEBuffer 4 containing 1 µg of M13 single-stranded DNA and a minimum of 10 units of Exonuclease VII incubated for 1 hour at 37°C results in <20% conversion to linear DNA as determined by agarose gel electrophoresis.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 units of Exonuclease VII incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release, Double Stranded) A 50 µl reaction in NEBuffer 4 containing 1 µg double stranded [³ H] E. coli DNA and a minimum of 10 units of Exonuclease VII incubated for 4 hours at 37°C releases <0.5% of the total radioactivity.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 4 containing 1 µg of HaeIII digested PhiX174 RF I DNA and a minimum of 10 units of Exonuclease VII incubated for 16 hours at 37°C results	Pass

Assay Name/Specification	Lot # 10022780
<p>in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	
<p>Protein Purity Assay (SDS-PAGE) Exonuclease VII is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of Exonuclease VII 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.</p>	Pass
<p>RNase Activity Assay (4 Hour Digestion) A 10 μl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 10 units of Exonuclease VII is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass

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



John Greci
Production Scientist
17 Oct 2018



Mary Conlon
Packaging Quality Control Inspector
17 Oct 2018