

New England Biolabs Certificate of Analysis

Product Name: *Msz Exonuclease I*
Catalog Number: *M0527S*
Concentration: *10,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme that will catalyze the release of 5 nmol of acid-soluble nucleotide in a total reaction volume of 100 µl in 15 minutes at 55°C in 1X rCutSmart Buffer.*
Packaging Lot Number: *10197991*
Expiration Date: *08/2025*
Storage Temperature: *-20°C*
Storage Conditions: *10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)*
Specification Version: *PS-M0527S v3.0*

Msz Exonuclease I Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0527SVIAL	Msz Exonuclease I	10197990	Pass
B6004SVIAL	rCutSmart™ Buffer	10202502	Pass

Assay Name/Specification	Lot # 10197991
Endonuclease Activity (Circular Single Stranded DNA) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of M13mp18 Single-stranded DNA and a minimum of 100 units of Msz Exonuclease I incubated for 16 hours at 37°C results in <10% conversion to linear DNA as determined by agarose gel electrophoresis.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of Msz Exonuclease I incubated for 16 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Protein Purity Assay (SDS-PAGE) Msz Exonuclease I is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
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 Msz Exonuclease I is incubated at 37°C. After incubation	Pass

Assay Name/Specification	Lot # 10197991
<p>for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p> <p>qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of Msz Exonuclease I 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>	<p>Pass</p>

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

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Heidi Church
Production Scientist
24 Oct 2023



Michael Tonello
Packaging Quality Control Inspector
24 Oct 2023