

## 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:** *10218693*  
**Expiration Date:** *01/2026*  
**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	10218660	Pass
B6004SVIAL	rCutSmart™ Buffer	10224841	Pass

Assay Name/Specification	Lot # 10218693
<b>Endonuclease Activity (Circular Single Stranded DNA)</b> 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
<b>Endonuclease Activity (Nicking)</b> 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
<b>Protein Purity Assay (SDS-PAGE)</b> Msz Exonuclease I is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>RNase Activity (Extended Digestion)</b> 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 # 10218693
<p>for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p> <p><b>qPCR DNA Contamination (E. coli Genomic)</b> 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 <math>\leq 1</math> E. coli genome.</p>	<p><b>Pass</b></p>

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

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13 Feb 2024




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15 Feb 2024