

## New England Biolabs Certificate of Analysis

**Product Name:** *Thermostable USER<sup>®</sup> III Enzyme*

**Catalog Number:** *M5509S*

**Concentration:** *1,000 U/ml*

**Unit Definition:** *One unit is defined as the amount of enzyme required to nick 10 pmol of a 60-mer fluorescently labeled oligonucleotide duplex containing a single uracil base in 15 minutes at 65°C in a total reaction volume of 10 µL in 1X ThermoPol<sup>®</sup> Buffer.*

**Packaging Lot Number:** *10213697*

**Expiration Date:** *10/2025*

**Storage Temperature:** *-20°C*

**Storage Conditions:** *10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 178 µg/ml BSA (pH 7.4 @ 25°C)*

**Specification Version:** *PS-M5509S v1.0*

Thermostable USER <sup>®</sup> III Enzyme Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M5509SVIAL	Thermostable USER <sup>®</sup> III Enzyme	10211819	Pass
B9004SVIAL	ThermoPol <sup>®</sup> Reaction Buffer Pack	10187437	Pass

Assay Name/Specification	Lot # 10213697
<p><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 Thermostable USER<sup>®</sup> III Enzyme is incubated at 37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass
<p><b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 1 unit of Thermostable USER<sup>®</sup> III Enzyme is screened for the presence of E. coli genomic DNA using SYBR<sup>®</sup> 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

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

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24 Oct 2023

  
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