

New England Biolabs Certificate of Analysis

Product Name: USER® Enzyme
Catalog Number: M5505L
Concentration: 1,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to nick 10 pmol of a 34 mer oligonucleotide duplex containing a single uracil base, in 15 minutes at 37°C in a total reaction volume of 10 µl.
Packaging Lot Number: 10246078
Expiration Date: 03/2026
Storage Temperature: -20°C
Storage Conditions: 50 mM KCl, 5 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 175 µg/ml rAlbumin (pH 7.4 @ 25°C)
Specification Version: PS-M5505S/L v2.0

USER® Enzyme Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M5505LVIAL	USER® Enzyme	10233216	Pass
B6004SVIAL	rCutSmart™ Buffer	10241729	Pass

Assay Name/Specification	Lot # 10246078
<p>Functional Test (USER, Transformation assay) A 10 µl reaction in ThermoPol Reaction Buffer containing 20 ng linearized pNEB206A, 100 ng of a 950 bp control PCR product and 1 unit of USER® Enzyme was incubated for 15 minutes at 37°C followed by 15 minutes at 25°C. After transformation into ER2267 chemically-competent cells >95% of colonies contained recombinant plasmid.</p>	Pass
<p>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 USER® Enzyme is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 1 unit of USER® Enzyme 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

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

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Production Scientist
15 Mar 2024



Josh Hersey
Packaging Quality Control Inspector
28 Jun 2024