

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: 10068456
Expiration Date: 09/2021
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 BSA, (pH 7.4 @ 25°C)
Specification Version: PS-M5505S/L v1.0

| USER [®] Enzyme Component List | | | |
|---|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M5505LVIAL | USER [®] Enzyme | 10054977 | Pass |
| B7204SVIAL | CutSmart [®] Buffer | 10068804 | Pass |

| Assay Name/Specification | Lot # 10068456 |
|--|----------------|
| <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>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 |
| <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 |

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

Lauren Higgins

Lauren Sears Higgins
Production Scientist
19 Sep 2019

Michael Tonello

Michael Tonello
Packaging Quality Control Inspector
19 Mar 2020