

## New England Biolabs Certificate of Analysis

**Product Name:** OneTaq® Quick-Load® DNA Polymerase  
**Catalog Number:** M0509X  
**Concentration:** 5,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme that will incorporate 15 nmol of dNTP into acid insoluble material in 30 minutes at 75°C.  
**Lot Number:** 10054264  
**Expiration Date:** 07/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.5 % Tween® 20, 0.5 % IGEPAL® CA-630, 50% Glycerol, (pH 7.4 @ 25°C)  
**Specification Version:** PS-M0509S/L/X v1.0

| OneTaq® Quick-Load® DNA Polymerase Component List |                                    |            |                      |
|---|------------------------------------|------------|----------------------|
| NEB Part Number                                   | Component Description              | Lot Number | Individual QC Result |
| M0509L  | OneTaq® Quick-Load® DNA Polymerase | 10047115   | Pass                 |

| Assay Name/Specification   | Lot # 10054264 |
|--|----------------|
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>           A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 5 units of OneTaq® Quick-Load® DNA Polymerase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass           |
| <p><b>PCR Amplification (5.0 kb Lambda DNA)</b><br/>           A 25 µl reaction in OneTaq® Quick-Load® Reaction Buffer in the presence of 200 µM dNTPs and 0.2 µM primers containing 5 ng Lambda DNA with 0.625 units of OneTaq® Quick-Load® DNA Polymerase for 25 cycles of PCR amplification results in the expected 5.0 kb product.</p>   | Pass           |
| <p><b>PCR Amplification (5.0 kb Lambda DNA)</b><br/>           A 25 µl reaction in OneTaq® Standard Reaction Buffer in the presence of 200 µM dNTPs and 0.2 µM primers containing 5 ng Lambda DNA with 0.625 units of OneTaq® Quick-Load® DNA Polymerase for 25 cycles of PCR amplification results in the expected 5.0 kb product.</p>  | Pass           |
| <p><b>RNase Activity (Extended Digestion)</b><br/>           A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA</p>   | Pass           |

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|---|----------------|
| and a minimum of 1 µl of OneTaq <sup>®</sup> Quick-Load <sup>®</sup> DNA Polymerase 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. |                |

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



Christie Vazquez  
Production Scientist  
23 Aug 2019



Michael Tonello  
Packaging Quality Control Inspector  
23 Aug 2019