## New England Biolabs
### Product Specification

**Product Name:** OneTaq® DNA Polymerase  
**Catalog #:** M0480S/L/X/V  
**Concentration:** 5,000 units/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.  
**Shelf Life:** 24 months  
**Storage Temp:** -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-M0480S/L/X v2.0  
**Effective Date:** 12 Feb 2020

<table>
<thead>
<tr>
<th><strong>Assay Name/Specification (minimum release criteria)</strong></th>
<th><strong>Details</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Specific DNase Activity (16 Hour)</strong></td>
<td>A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 5 units of OneTaq® 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.</td>
</tr>
<tr>
<td><strong>PCR Amplification (5.0 kb Lambda DNA)</strong></td>
<td>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® DNA Polymerase for 25 cycles of PCR amplification results in the expected 5.0 kb product.</td>
</tr>
<tr>
<td><strong>PCR Amplification (Buffer Dependent, &gt;65% GC-rich)</strong></td>
<td>A 25 µl reaction in OneTaq® GC Reaction Buffer in the presence of 200 µM dNTPs and 0.2 µM primers containing 10 ng Human Genomic DNA with 0.625 units of OneTaq® DNA Polymerase for 30 cycles of PCR amplification results in the buffer-dependent production of the expected 737 bp product.</td>
</tr>
<tr>
<td><strong>PCR Amplification (Enhancer Dependent, &gt;70% GC-rich)</strong></td>
<td>A 25 µl reaction in OneTaq® GC Reaction Buffer and 20% OneTaq® High GC Enhancer in the presence of 200 µM dNTPs and 0.2 µM primers containing 10 ng Human Genomic DNA with 0.625 units of OneTaq® DNA Polymerase for 30 cycles of PCR amplification results in the enhancer-dependent production of the expected 627 bp product.</td>
</tr>
<tr>
<td><strong>RNase Activity (Extended Digestion)</strong></td>
<td>A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of OneTaq® DNA Polymerase 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.</td>
</tr>
</tbody>
</table>
New England Biolabs
Product Specification

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Date 12 Feb 2020

Derek Robinson
Director, Quality Control