

## New England Biolabs Certificate of Analysis

*Product Name:* OneTaq<sup>®</sup> Hot Start Quick-Load<sup>®</sup> 2X Master Mix with GC Buffer  
*Catalog #:* M0489S/L  
*Concentration:* 2X Concentrate  
*Lot #:* 0271706  
*Assay Date:* 06/2017  
*Expiration Date:* 6/2019  
*Storage Temp:* -20°C  
*Composition (1X):* 80 mM Tris-SO<sub>4</sub> (pH 9.2 @ 25°C), 20 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 2 mM MgSO<sub>4</sub>, 0.2 mM dATP, 0.2 mM dCTP, 0.2 mM dGTP, 0.2 mM dTTP, 5 % Glycerol, 5 % DMSO, 0.06 % IGEPAL<sup>®</sup> CA-630, 0.05 % Tween<sup>®</sup> 20, 1 X Xylene cyanol, 1 X Tartrazine, 25 units/ml OneTaq<sup>®</sup> Hot Start DNA Polymerase  
*Specification Version:* PS-M0489S/L v1.0  
*Effective Date:* 10 May 2017

Assay Name/Specification (minimum release criteria)	Lot #0271706
<b>Inhibition of Primer Extension (Hot Start, Radioactivity Incorporation)</b> - A 50 µl primer extension assay in ThermoPol <sup>®</sup> Reaction Buffer in the presence of 200 µM dNTPs including [ <sup>3</sup> H]-dTTP, containing 15 nM primed single-stranded M13mp18 with 2.5 units of OneTaq <sup>®</sup> Hot Start DNA Polymerase incubated for 16 hours at 25°C yields >95% inhibition when compared to a non-hot start control reaction.	<b>Pass</b>
<b>Non-Specific DNase Activity (16 hour, Buffer)</b> - A 50 µl reaction in 1X OneTaq <sup>®</sup> Hot Start Quick-Load <sup>®</sup> Master Mix with GC Buffer containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>PCR Amplification (Buffer Dependent, &gt;65% GC-rich, Master Mix)</b> - A 25 µl reaction in 1X OneTaq <sup>®</sup> Hot Start Quick-Load <sup>®</sup> Master Mix with GC Buffer and 0.2 µM primers containing 10 ng Human Genomic DNA for 30 cycles of PCR amplification results in the buffer-dependent production of the 737 bp product.	<b>Pass</b>
<b>PCR Amplification (Enhancer Dependent, &gt;70% GC-rich, Master Mix)</b> - A 25 µl reaction in 1X OneTaq <sup>®</sup> Hot Start Quick-Load <sup>®</sup> Master Mix with GC Buffer and 20% OneTaq <sup>®</sup> High GC Enhancer in the presence of 0.2 µM primers containing 10 ng Human Genomic DNA for 30 cycles of PCR amplification results in the enhancer-dependent production of the 627 bp product.	<b>Pass</b>



