

New England Biolabs Certificate of Analysis

Product Name: OneTaq® Hot Start Quick-Load® 2X Master Mix with GC Buffer
Catalog Number: M0489L
Concentration: 2 X Concentrate
Packaging Lot Number: 10068191
Expiration Date: 11/2021
Storage Temperature: -20°C
Specification Version: PS-M0489S/L v2.0
Composition (1X): 80 mM Tris-SO4 (pH 9.2 @ 25°C), 20 mM (NH4)2SO4, 2 mM MgSO4, 0.2 mM dATP, 0.2 mM dCTP, 0.2 mM dGTP, 0.2 mM dTTP, 5 % Glycerol, 5 % DMSO, 0.06 % IGEPAL® CA-630, 0.05 % Tween® 20, 1 X Xylene cyanol, 1 X Tartrazine, 25 units/ml OneTaq® Hot Start DNA Polymerase

OneTaq® Hot Start Quick-Load® 2X Master Mix with GC Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0489SVIAL	OneTaq® Hot Start Quick-Load® 2X Master Mix with GC Buffer	10059791	Pass
B9026AVIAL	OneTaq® High GC Enhancer	10031487	Pass

Assay Name/Specification	Lot # 10068191
<p>Inhibition of Primer Extension (Hot Start, Radioactivity Incorporation) A 50 µl primer extension assay in ThermoPol® Reaction Buffer in the presence of 200 µM dNTPs including [³H]-dTTP, containing 15 nM primed single-stranded M13mp18 with 2.5 units of OneTaq® Hot Start DNA Polymerase incubated for 16 hours at 25°C yields >95% inhibition when compared to a non-hot start control reaction.</p>	Pass
<p>Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X OneTaq® Hot Start Quick-Load® Master Mix with GC Buffer containing 1 µg of T3 or T7 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.</p>	Pass
<p>PCR Amplification (Buffer Dependent, >65% GC-rich, Master Mix) A 25 µl reaction in 1X OneTaq® Hot Start Quick-Load® 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.</p>	Pass
<p>PCR Amplification (Enhancer Dependent, >70% GC-rich, Master Mix)</p>	Pass

Assay Name/Specification	Lot # 10068191
<p>A 25 µl reaction in 1X OneTaq® Hot Start Quick-Load® Master Mix with GC Buffer and 20% OneTaq® 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.</p>	
<p>PCR Amplification (Hot Start 2 kb Lambda DNA) A 25 µl reaction in OneTaq® Standard Reaction Buffer in the presence of 200 µM dNTPs and 0.2 µM primers containing 10 pg Lambda DNA and 50 ng Human Genomic DNA with 0.625 units of OneTaq® Hot Start DNA Polymerase for 30 cycles of PCR amplification results in an increase in yield of the 2 kb Lambda product and a decrease in non-specific genomic bands when compared to a non-hot start control reaction.</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 OneTaq® Hot Start Quick-Load® 2X Master Mix with GC Buffer is incubated at 37°C. After incubation for 4 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.



Christie Vazquez
Production Scientist
13 Feb 2019



Michael Tonello
Packaging Quality Control Inspector
30 Mar 2020