

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: 10250253
Expiration Date: 01/2026
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

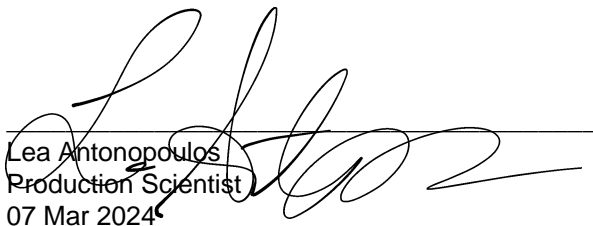
OneTaq® Hot Start Quick-Load® 2X Master Mix with GC Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0489SVIAL	OneTaq® Hot Start Quick-Load® 2X Master Mix with GC Buffer	10226642	Pass
B9026AVIAL	OneTaq® High GC Enhancer	10210663	Pass

Assay Name/Specification	Lot # 10250253
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 [³ H]-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.	Pass
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.	Pass
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.	Pass
PCR Amplification (Enhancer Dependent, >70% GC-rich, Master Mix)	Pass

Assay Name/Specification	Lot # 10250253
<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.

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 Lea Antonopoulos
 Production Scientist
 07 Mar 2024


 Josh Hersey
 Packaging Quality Control Inspector
 15 Aug 2024