

## New England Biolabs Certificate of Analysis

**Product Name:** Hemo KlenTaq®  
**Catalog Number:** M0332S  
**Unit Definition:** N/A  
**Packaging Lot Number:** 10069957  
**Expiration Date:** 03/2022  
**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-M0332S/L v2.0

Hemo KlenTaq® Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0332SVIAL	Hemo KlenTaq®	10067034	Pass
B0332SVIAL	Hemo KlenTaq® Reaction Buffer	10045842	Pass

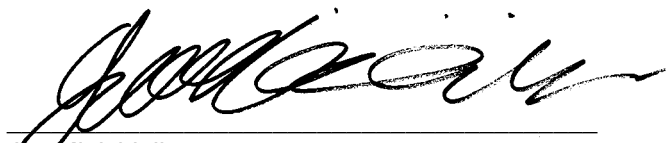
Assay Name/Specification	Lot # 10069957
<b>Phosphatase Activity (pNPP)</b> A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl <sub>2</sub> containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 2 µl Hemo KlenTaq® incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> Hemo KlenTaq® is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 1 µl of Hemo KlenTaq® is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> 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 1 µl of Hemo KlenTaq® incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease	Pass

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degradation as determined by agarose gel electrophoresis.	
<p><b>PCR Amplification (0.5 kb Whole Blood DNA)</b> A 50 µl reaction in Hemo KlenTaq<sup>®</sup> Reaction Buffer in the presence of 200 µM dNTPs and 0.3 µM primers containing 10% whole blood treated with sodium heparin, sodium EDTA, potassium EDTA or sodium citrate with 4 µl of Hemo KlenTaq<sup>®</sup> for 35 cycles of PCR amplification results in the expected 0.5 kb product.</p>	<b>Pass</b>
<p><b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in Hemo KlenTaq<sup>®</sup> Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 8 µl of Hemo KlenTaq<sup>®</sup> incubated for 4 hours at 37°C and 75°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b> A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Hemo KlenTaq<sup>®</sup> 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.</p>	<b>Pass</b>
<p><b>Single Stranded DNase Activity (FAM-Labeled Oligo)</b> A 20 µl reaction in Hemo KlenTaq<sup>®</sup> Reaction Buffer containing a 10 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 8 µl of Hemo KlenTaq<sup>®</sup> incubated for 30 minutes at 37°C and 75°C yields &lt;10% degradation as determined by capillary electrophoresis.</p>	<b>Pass</b>

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



Christie Vazquez  
Production Scientist  
11 Mar 2020



Jay Minichiello  
Packaging Quality Control Inspector  
27 Mar 2020