

## New England Biolabs Certificate of Analysis

**Product Name:** LongAmp® Taq DNA Polymerase  
**Catalog Number:** M0323S  
**Concentration:** 2,500 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 75°C.  
**Lot Number:** 10025592  
**Expiration Date:** 10/2020  
**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-M0323S/L v1.0

LongAmp® Taq DNA Polymerase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0323SVIAL	LongAmp® Taq DNA Polymerase	10023238	Pass
B0323SVIAL	LongAmp® Taq Reaction Buffer	0051802	Pass

Assay Name/Specification	Lot # 10025592
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 2.5 units of LongAmp® Taq 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.</p>	Pass
<p><b>PCR Amplification (30 kb Human Genomic DNA)</b>            A 25 µl reaction in LongAmp® Taq Reaction Buffer in the presence of 300 µM dNTPs and 0.4 µM primers containing 500 ng Human Genomic DNA with 2.5 units of LongAmp® Taq DNA Polymerase for 28 cycles of PCR amplification results in the expected 30 kb product.</p>	Pass
<p><b>PCR Amplification (30 kb Lambda DNA)</b>            A 25 µl reaction in LongAmp® Taq Reaction Buffer in the presence of 300 µM dNTPs and 0.4 µM primers containing 1 ng Lambda DNA with 2.5 units of LongAmp® Taq DNA Polymerase for 28 cycles of PCR amplification results in the expected 30 kb product.</p>	Pass
<p><b>qPCR DNA Contamination (E. coli Genomic)</b>            A minimum of 2.5 units of LongAmp® Taq DNA Polymerase is screened for the presence</p>	Pass

Assay Name/Specification	Lot # 10025592
<p>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 <math>\leq 1</math> E. coli genome.</p> <p><b>RNase Activity (Extended Digestion)</b> A 10 <math>\mu</math>l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 <math>\mu</math>l of LongAmp® Taq 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.</p>	<p><b>Pass</b></p>

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



Christie Vazquez  
Production Scientist  
04 Oct 2018



Michael Tonello  
Packaging Quality Control Inspector  
26 Nov 2018