

## New England Biolabs Certificate of Analysis

**Product Name:** T7 DNA Polymerase (unmodified)  
**Catalog Number:** M0274S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme that will incorporate 10 nmoles of dNTP into acid insoluble material in 30 minutes at 37°C.  
**Lot Number:** 10021765  
**Expiration Date:** 08/2020  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM KPO<sub>4</sub>, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.0 @ 25°C)  
**Specification Version:** PS-M0274S/L v1.0

T7 DNA Polymerase (unmodified) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0274SVIAL	T7 DNA Polymerase (unmodified)	10018832	Pass
B9000SVIAL	BSA, Molecular Biology Grade	10016818	Pass
B0274AVIAL	T7 DNA Polymerase (unmodified) Reaction Bufer	0021709	Pass

Assay Name/Specification	Lot # 10021765
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of T7 DNA Polymerase (unmodified) incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p><b>qPCR DNA Contamination (E. coli Genomic)</b>            A minimum of 10 units of T7 DNA Polymerase (unmodified) 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.</p>	Pass
<p><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 100 units T7 DNA Polymerase (unmodified) incubated for 4 hours at 37°C yields &lt;0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	Pass

Assay Name/Specification	Lot # 10021765
<b>Protein Purity Assay (SDS-PAGE)</b> T7 DNA Polymerase (unmodified) is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	<b>Pass</b>

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



Tony Spear-Alfonso  
Production Scientist  
21 Aug 2018



Michael Tonello  
Packaging Quality Control Inspector  
13 Sep 2018