

## 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.  
**Packaging Lot Number:** 10135910  
**Expiration Date:** 11/2023  
**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)	10135563	Pass
B9200SVIAL	Recombinant Albumin, Molecular Biology G	10116056	Pass
B0274AVIAL	T7 DNA Polymerase (unmodified) Reaction Buffer	10123098	Pass

Assay Name/Specification	Lot # 10135910
<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>Protein Purity Assay (SDS-PAGE)</b>            T7 DNA Polymerase (unmodified) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</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
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a</p>	Pass

Assay Name/Specification	Lot # 10135910
minimum of 100 units of T7 DNA Polymerase (unmodified) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	

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

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Christie Vazquez  
Production Scientist  
28 Jan 2022



Michael Tonello  
Packaging Quality Control Inspector  
28 Jan 2022