

New England Biolabs Certificate of Analysis

Product Name: T7 DNA Polymerase (unmodified)
Catalog Number: M0274L
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: 10167009
Expiration Date: 08/2024
Storage Temperature: -20°C
Storage Conditions: 50 mM KPO₄, 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
M0274LVIAL	T7 DNA Polymerase (unmodified)	10167011	Pass
B9200SVIAL	Recombinant Albumin, Molecular Biology G	10150376	Pass
B0274AVIAL	T7 DNA Polymerase (unmodified) Reaction Buffer	10157594	Pass

Assay Name/Specification	Lot # 10167009
Protein Purity Assay (SDS-PAGE) T7 DNA Polymerase (unmodified) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
qPCR DNA Contamination (E. coli Genomic) 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.	Pass
Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ 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 <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a	Pass

Assay Name/Specification	Lot # 10167009
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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Trinh Nguyen
Production Scientist
06 Oct 2022



Josh Hersey
Packaging Quality Control Inspector
26 Oct 2022