NEW ENGLAND BioLabs Inc.
be INSPIRED drive DISCOVERY stay GENUINE
240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
Fax 978-921-1350
www.neb.com
info@neb.com

# 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:* | *10161623* |
| *Expiration Date:* | *04/2024* |
| *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) | 10147706 | **Pass** |
| B9200SVIAL | Recombinant Albumin, Molecular Biology G | 10150376 | **Pass** |
| B0274AVIAL | T7 DNA Polymerase (unmodified) Reaction Bufer | 10157594 | **Pass** |

| Assay Name/Specification | Lot # 10161623 |
|---|---|
| **Protein Purity Assay (SDS-PAGE)**<br>T7 DNA Polymerase (unmodified) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | **Pass** |
| **qPCR DNA Contamination (E. coli Genomic)**<br>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)**<br>A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl2 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)**<br>A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a | **Pass** |

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| Assay Name/Specification | Lot # 10161623 |
|---|---|
| minimum of 100 units of T7 DNA Polymerase (unmodified) incubated for 4 hours at 37ºC 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.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Christie Vazquez
Production Scientist
24 Aug 2022

Erin Varney
Packaging Quality Control Inspector
24 Aug 2022