

## 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:** 10091672  
**Expiration Date:** 11/2022  
**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 |
| M0274SVIAL                                    | T7 DNA Polymerase (unmodified)                | 10090087   | Pass                 |
| B9000SVIAL                                    | BSA, Molecular Biology Grade                  | 10082650   | Pass                 |
| B0274AVIAL                                    | T7 DNA Polymerase (unmodified) Reaction Bufer | 10076262   | Pass                 |

| Assay Name/Specification   | Lot # 10091672 |
|--|----------------|
| <p><b>Endonuclease Activity (Nicking)</b><br/>           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>Phosphatase Activity (pNPP)</b><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 &lt;0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p> | Pass           |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>           T7 DNA Polymerase (unmodified) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>   | Pass           |
| <p><b>qPCR DNA Contamination (E. coli Genomic)</b><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</p>   | Pass           |

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|--|----------------|
| 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 $\leq 1$ E. coli genome. |                |

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

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15 Dec 2020



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15 Dec 2020