

New England Biolabs Certificate of Analysis

Product Name: T7 DNA Polymerase (unmodified)
Catalog #: M0274S/L
Concentration: 10,000 units/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 #: 0111703
Assay Date: 03/2017
Expiration Date: 3/2019
Storage Temp: -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
Effective Date: 16 Oct 2015

Assay Name/Specification (minimum release criteria)	Lot #0111703
Endonuclease Activity (Nicking) - 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 <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Phosphatase Activity (pNPP) - A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM <i>p</i> -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
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 (<i>E. coli</i> Genomic) - A minimum of 10 units of T7 DNA Polymerase (unmodified) is screened for the presence of <i>E. coli</i> genomic DNA using SYBR® Green qPCR with primers specific for the <i>E. coli</i> 16S rRNA locus. Results are quantified using a standard curve generated from purified <i>E. coli</i> genomic DNA. The measured level of <i>E. coli</i> genomic DNA contamination is ≤ 1 <i>E. coli</i> genome.	Pass



Authorized by
Melanie Fortier
16 Oct 2015



Inspected by
David Guo
28 Feb 2017

