

## 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 #:* 0111609  
*Assay Date:* 09/2016  
*Expiration Date:* 9/2018  
*Storage Temp:* -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  
*Effective Date:* 16 Oct 2015

Assay Name/Specification (minimum release criteria)	Lot #0111609
<b>Endonuclease Activity (Nicking)</b> - 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.	<b>Pass</b>
<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 <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.	<b>Pass</b>
<b>Protein Purity Assay (SDS-PAGE)</b> - T7 DNA Polymerase (unmodified) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	<b>Pass</b>
<b>qPCR DNA Contamination (<i>E. coli</i> Genomic)</b> - 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.	<b>Pass</b>



Authorized by  
Melanie Fortier  
16 Oct 2015



Inspected by  
Tony Spear-Alfonso  
19 Jan 2017

