

New England Biolabs Certificate of Analysis

Product Name: T4 DNA Polymerase
Catalog #: M0203S/L
Concentration: 3,000 units/ml
Unit Definition: One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 37°C.
Lot #: 0401612
Assay Date: 12/2016
Expiration Date: 12/2018
Storage Temp: -20°C
Storage Conditions: 100 mM KPO₄ , 1 mM DTT , 50 % Glycerol, (pH 6.5 @ 25°C)
Specification Version: PS-M0203S/L v1.0
Effective Date: 17 May 2016

Assay Name/Specification (minimum release criteria)	Lot #0401612
Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of T4 DNA Polymerase 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 T4 DNA Polymerase 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) - T4 DNA Polymerase 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 3 units of T4 DNA Polymerase 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
17 May 2016



Inspected by
Tony Spear-Alfonso
11 Jan 2017

