

New England Biolabs Certificate of Analysis

Product Name: T7 RNA Polymerase (High Concentration)
Catalog Number: M0460T
Concentration: 1,000,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will incorporate 1 nmol ATP into acid-insoluble material in a total reaction volume of 50 µl in 1 hour at 37°C in 1X RNA Polymerase Reaction Buffer.
Packaging Lot Number: 10115883
Expiration Date: 08/2023
Storage Temperature: -20°C
Storage Conditions: 100 mM NaCl, 50 mM Tris-HCl (pH 7.9), 1 mM EDTA, 20 mM BME, 0.1 % Triton X-100, 50 % Glycerol
Specification Version: PS-M0460T v1.0

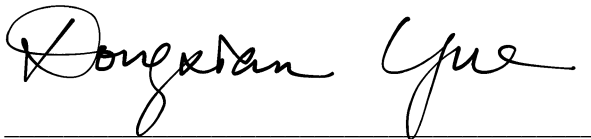
T7 RNA Polymerase (High Concentration) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0460TVIAL	T7 RNA Polymerase (High Concentration)	10115882	Pass
B9012SVIAL	RNAPol Reaction Buffer	10100016	Pass
B2534AVIAL	MgCl ₂ Solution	10057487	Pass

Assay Name/Specification	Lot # 10115883
Endonuclease Activity (Nicking) A 50 µl reaction in RNAPol Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 150 units of T7 RNA Polymerase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in RNAPol Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 150 units of T7 RNA Polymerase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in RNAPol Reaction Buffer containing 1 µg of Lambda DNA and a minimum of 250 units of T7 RNA Polymerase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

Assay Name/Specification	Lot # 10115883
<p>Protein Purity Assay (SDS-PAGE) T7 RNA Polymerase is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>RNase Activity (Extended Digestion) A 10 μl reaction in RNAPol Reaction Buffer containing 40 ng of a 300 base single-stranded RNA and a minimum of 50 units of T7 RNA Polymerase is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass
<p>Promoter Specificity A 50 μl reaction in RNAPol Reaction Buffer in the presence of 2 mM NTPs containing 1 μg of Lambda DNA as a template and a minimum of 200 units of T7 RNA Polymerase incubated for 1 hour at 37°C results in <1.5% of the amount of product incorporated as compared to a control reaction using T7 DNA as a template.</p>	Pass

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

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Dongxian Yue
Production Scientist
11 Aug 2021



Josh Hersey
Packaging Quality Control Inspector
11 Aug 2021