

New England Biolabs Certificate of Analysis

Product Name: Hi-T7™ RNA Polymerase (High Concentration)
Catalog Number: M0470T
Concentration: 1,000,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to incorporate 1 nmol ATP into acid-insoluble material in 1 hour at 50°C.
Packaging Lot Number: 10204822
Expiration Date: 08/2025
Storage Temperature: -20°C
Storage Conditions: 50 mM Tris-HCl, 100 mM NaCl, 1 mM EDTA, 1 mM DTT, 0.1% Triton®X-100, 50% Glycerol, (pH 7.9 @ 25°C)
Specification Version: PS-M0470T v1.0

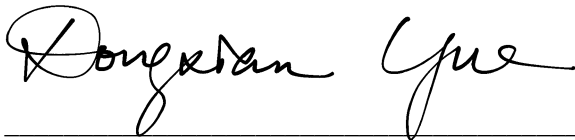
Hi-T7™ RNA Polymerase (High Concentration) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0470TVIAL	Hi-T7™ RNA Polymerase (High Concentration)	10195936	Pass
B2534AVIAL	MgCl ₂ Solution	10164116	Pass
B0658AVIAL	10X Hi-T7™ RNA Polymerase Reaction Buffer	10164455	Pass

Assay Name/Specification	Lot # 10204822
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 150 units of Hi-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 NEBuffer 4 containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 150 units of Hi-T7™ RNA Polymerase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Protein Purity Assay (SDS-PAGE) Hi-T7™ RNA Polymerase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity (Extended Digestion) A 10 µl reaction in 1X NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 50 units of Hi-T7™ RNA Polymerase is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by	Pass

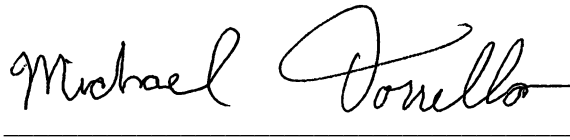
Assay Name/Specification	Lot # 10204822
gel electrophoresis using fluorescent detection.	

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



Dongxian Yue
Production Scientist
21 Aug 2023



Michael Tonello
Packaging Quality Control Inspector
22 Aug 2023