

## New England Biolabs Certificate of Analysis

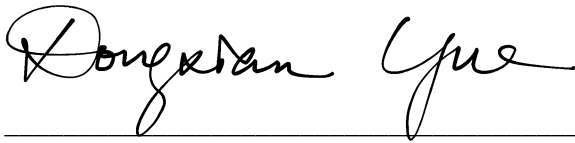
**Product Name:** Hi-T7™ RNA Polymerase (High Concentration)  
**Catalog Number:** M0470T  
**Concentration:** 1,000,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to incorporate 1 nmol ATP into acid-insoluble material in 1 hour at 50°C.  
**Packaging Lot Number:** 10058884  
**Expiration Date:** 11/2021  
**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)	10057274	Pass
B2534AVIAL	MgCl <sub>2</sub> Solution	10057487	Pass
B0658AVIAL	10X Hi-T7™ RNA Polymerase Reaction Buffer	10057325	Pass

Assay Name/Specification	Lot # 10058884
<b>RNase Activity (Extended Digestion)</b> 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 gel electrophoresis using fluorescent detection.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> Hi-T7™ RNA Polymerase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 4 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> 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
<b>Endonuclease Activity (Nicking)</b> 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	Pass

Assay Name/Specification	Lot # 10058884
in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	

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



Dongxian Yue  
Production Scientist  
18 Oct 2019



Michael Tonello  
Packaging Quality Control Inspector  
25 Oct 2019