

## 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:** 10164115  
**Expiration Date:** 06/2024  
**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

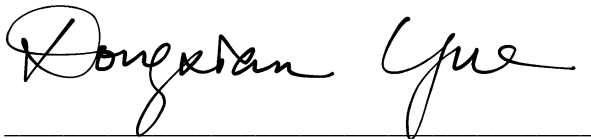
Hi-T7™ RNA Polymerase (High Concentration) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0470TVIAL	Hi-T7™ RNA Polymerase (High Concentration)	10161208	Pass
B2534AVIAL	MgCl <sub>2</sub> Solution	10164116	Pass
B0658AVIAL	10X Hi-T7™ RNA Polymerase Reaction Buffer	10151841	Pass

Assay Name/Specification	Lot # 10164115
<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>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 in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	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	Pass


Assay Name/Specification	Lot # 10164115
Polymerase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	

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](http://www.neb.com/trademarks) for additional information.



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22 Aug 2022



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Packaging Quality Control Inspector  
16 Sep 2022