NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*Hi-T7 RNA Polymerase - 5000 units*
Catalog Number:	*M0658S*
Concentration:	*50,000 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.*
Lot Number:	*10014907*
Expiration Date:	*07/2020*
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-M0658S v1.0*

Hi-T7 RNA Polymerase - 5000 units Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M0658SVIAL	Hi-T7® RNA Polymerase	10013742	**Pass**
B0658AVIAL	10X Hi-T7™ RNA Polymerase Reaction Buffer	10013743	**Pass**

Assay Name/Specification	**Lot # 10014907**
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 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**

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

Dongxian Yue
Production Scientist
27 Jun 2018

Josh Hersey
Packaging Quality Control Inspector
10 Jul 2018