

## New England Biolabs Certificate of Analysis

**Product Name:** *E.coli RNA Polymerase, Core Enzyme*  
**Catalog Number:** M0550S  
**Concentration:** 1,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to incorporate 1 nmole NTP into RNA in 10 minutes at 37°C in the presence of sigma factor 70.  
**Packaging Lot Number:** 10262099  
**Expiration Date:** 08/2026  
**Storage Temperature:** -20°C  
**Storage Conditions:** 20 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.5 @ 25°C)  
**Specification Version:** PS-M0550S v1.0

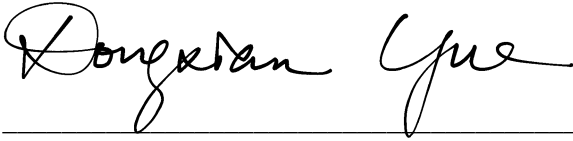
E.coli RNA Polymerase, Core Enzyme Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0550SVIAL	E.coli RNA Polymerase, Core Enzyme	10249740	Pass
B0550AVIAL	5X E. coli RNA Polymerase Reaction Buffer	10230761	Pass

Assay Name/Specification	Lot # 10262099
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 units of E. coli RNA Polymerase, Core Enzyme incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><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 5 units of E. coli RNA Polymerase, Core Enzyme incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b>            A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 unit of E. coli RNA Polymerase, Core Enzyme is incubated at 37°C. After incubation for 4 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<b>Pass</b>

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



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Production Scientist  
12 Sep 2024



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Packaging Quality Control Inspector  
17 Oct 2024