

## New England Biolabs Certificate of Analysis

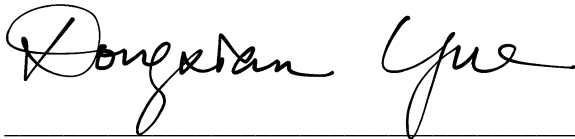
**Product Name:** Pyrophosphatase, Inorganic (*E. coli*)  
**Catalog Number:** M0361L  
**Concentration:** 100 U/ml  
**Unit Definition:** One unit is the amount of enzyme that will generate 1  $\mu\text{mol}$  of phosphate per minute from inorganic pyrophosphate under standard reaction conditions.  
**Lot Number:** 10034920  
**Expiration Date:** 02/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 100 mM NaCl, 20 mM Tris-HCl (pH 8.0), 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol  
**Specification Version:** PS-M0361S/L v2.0

Pyrophosphatase, Inorganic ( <i>E. coli</i> ) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0361LVIAL	Pyrophosphatase, Inorganic ( <i>E. coli</i> )	10034921	Pass

Assay Name/Specification	Lot # 10034920
<p><b>Endonuclease Activity (Nicking)</b>            A 50 <math>\mu\text{l}</math> reaction in NEBuffer 4 containing 1 <math>\mu\text{g}</math> of supercoiled PhiX174 DNA and a minimum of 0.5 units of Pyrophosphatase, Inorganic (<i>E. coli</i>) incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 <math>\mu\text{l}</math> reaction in NEBuffer 4 containing 1 <math>\mu\text{g}</math> of a mixture of single and double-stranded [<math>^3\text{H}</math>] <i>E. coli</i> DNA and a minimum of 0.5 units of Pyrophosphatase, Inorganic (<i>E. coli</i>) incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Phosphatase Activity (pNPP)</b>            A 100 <math>\mu\text{l}</math> reaction in NEBuffer 4 containing 10 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 1 unit Pyrophosphatase, Inorganic (<i>E. coli</i>) incubated for 1 hour at 37°C yields &lt;0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	Pass
<p><b>Protein Purity Assay (SDS-PAGE)</b></p>	Pass

Assay Name/Specification	Lot # 10034920
<p>Pyrophosphatase, Inorganic (E. coli) is <math>\geq 95\%</math> pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> <p><b>RNase Activity (Extended Digestion)</b> A 10 <math>\mu</math>l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 0.1 unit of Pyrophosphatase, Inorganic (E. coli) is incubated at 37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<p><b>Pass</b></p>

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



Dongxian Yue  
Production Scientist  
01 Feb 2019



Michael Tonello  
Packaging Quality Control Inspector  
07 Feb 2019