

## New England Biolabs Certificate of Analysis

**Product Name:** *Pyrophosphatase, Inorganic (E. coli)*  
**Catalog Number:** M0361S  
**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.  
**Packaging Lot Number:** 10086148  
**Expiration Date:** 10/2022  
**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 (E. coli) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0361SVIAL	Pyrophosphatase, Inorganic (E. coli)	10086149	Pass

Assay Name/Specification	Lot # 10086148
<b>RNase Activity (Extended Digestion)</b> A 10 $\mu\text{l}$ 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, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> Pyrophosphatase, Inorganic (E. coli) is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>Phosphatase Activity (pNPP)</b> A 100 $\mu\text{l}$ reaction in NEBuffer 4 containing 10 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 1 unit Pyrophosphatase, Inorganic (E. coli) incubated for 1 hour at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 $\mu\text{l}$ reaction in NEBuffer 4 containing 1 $\mu\text{g}$ of a mixture of single and double-stranded [ $^3\text{H}$ ] E. coli DNA and a minimum of 0.5 units of Pyrophosphatase,	Pass

Assay Name/Specification	Lot # 10086148
<p>Inorganic (E. coli) incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p> <p><b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 0.5 units of Pyrophosphatase, Inorganic (E. coli) incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<p><b>Pass</b></p>

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

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Bhairavi Jani  
Production Scientist  
10 Nov 2020



Michael Tonello  
Packaging Quality Control Inspector  
10 Nov 2020