

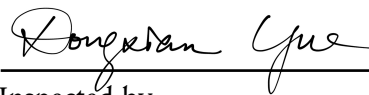
## New England Biolabs Certificate of Analysis

*Product Name:* Pyrophosphatase, Inorganic (*E. coli*)  
*Catalog #:* M0361S/L  
*Concentration:* 100 units/ml  
*Unit Definition:* One unit is the amount of enzyme that will generate 1  $\mu$ mol of phosphate per minute from inorganic pyrophosphate under standard reaction conditions.  
*Lot #:* 0031711  
*Assay Date:* 11/2017  
*Expiration Date:* 11/2019  
*Storage Temp:* -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  
*Effective Date:* 27 Apr 2015

Assay Name/Specification (minimum release criteria)	Lot #0031711
<b>Endonuclease Activity (Nicking)</b> - A 50 $\mu$ l reaction in NEBuffer 4 containing 1 $\mu$ g 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 <10% conversion to the nicked form as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>Exonuclease Activity (Radioactivity Release)</b> - A 50 $\mu$ l reaction in NEBuffer 4 containing 1 $\mu$ g of a mixture of single and double-stranded [ <sup>3</sup> H] <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 <0.1% of the total radioactivity.	<b>Pass</b>
<b>Phosphatase Activity (pNPP)</b> - A 100 $\mu$ l reaction in NEBuffer 4 containing 10 mM <i>p</i> -Nitrophenol Phosphate (pNPP) and a minimum of 1 unit Pyrophosphatase, Inorganic ( <i>E. coli</i> ) incubated for 1 hour at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	<b>Pass</b>
<b>Protein Purity Assay (SDS-PAGE)</b> - Pyrophosphatase, Inorganic ( <i>E. coli</i> ) is $\geq$ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	<b>Pass</b>
<b>RNase Activity (Extended Digestion)</b> - A 10 $\mu$ 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 ( <i>E. coli</i> ) 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.	<b>Pass</b>



Authorized by  
Derek Robinson  
27 Apr 2015



Inspected by  
Dongxian Yue  
01 Nov 2017

