

New England Biolabs Product Specification

Product Name:	<i>Pyrophosphatase, Inorganic (E. coli)</i>
Catalog #:	M0361S/L
Concentration:	100 units/ml
Unit Definition:	One unit is the amount of enzyme that will generate 1 μ mol of phosphate per minute from inorganic pyrophosphate under standard reaction conditions.
Shelf Life:	24 months
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:	26 Feb 2014

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking) - A 50 μ l reaction in NEBuffer 4 containing 1 μ g 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 <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Exonuclease Activity (Radioactivity Release) - A 50 μ l reaction in NEBuffer 4 containing 1 μ g of a mixture of single and double-stranded [³H] *E. coli* DNA and a minimum of 0.5 units of Pyrophosphatase, Inorganic (*E. coli*) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Phosphatase Activity (pNPP) - A 100 μ 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.

Protein Purity Assay (SDS-PAGE) - Pyrophosphatase, Inorganic (*E. coli*) is \geq 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

RNase Activity (Extended Digestion) - A 10 μ 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.



Date 26 Feb 2014

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Director of Quality Control

