

New England Biolabs Certificate of Analysis

Product Name: Pyrophosphatase, Inorganic (yeast)
Catalog #: M2403S/L
Concentration: 100 units/ml
Unit Definition: One unit is the amount of enzyme that will generate 1 μmol of phosphate per minute from inorganic pyrophosphate under standard reaction conditions.
Lot #: 0031509
Assay Date: 09/2015
Expiration Date: 9/2017
Storage Temp: -20°C
Storage Conditions: 100 mM KCl, 20 mM Tris-HCl (pH 8.0), 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol
Specification Version: PS-M2403S/L v1.0
Effective Date: 06 Dec 2013

Assay Name/Specification (minimum release criteria)	Lot #0031509
dNTPase Activity - A 0.5 ml reaction in ThermoPol Reaction Buffer in the presence of 200 μM each dNTPs and a minimum of 1 unit Pyrophosphatase, Inorganic (yeast) incubated for 1 hour at 37°C results in <0.05 μM of inorganic phosphate from dNTPs as determined by the AAM assay.	Pass
Endonuclease Activity (Nicking) - A 50 μl reaction in NEBuffer 4 containing 1 μg of supercoiled PhiX174 DNA and a minimum of 1 unit of Pyrophosphatase, Inorganic (yeast) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) - A 50 μl reaction in NEBuffer 4 containing 1 μg of a mixture of single and double-stranded [³ H] <i>E. coli</i> DNA and a minimum of 1 unit of Pyrophosphatase, Inorganic (yeast) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Non-Specific DNase Activity (16 Hour) - A 50 μl reaction in NEBuffer 4 containing 1 μg of Lambda DNA and a minimum of 1 unit of Pyrophosphatase, Inorganic (yeast) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Phosphatase Activity (pNPP) - A 100 μl reaction in NEBuffer 3 containing 10 mM <i>p</i> -Nitrophenol Phosphate (pNPP) and a minimum of 1 unit Pyrophosphatase, Inorganic (yeast) incubated for 1 hour at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
RNase Activity (Extended Digestion) - A 10 μl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 0.1 unit of Pyrophosphatase, Inorganic (yeast) is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass



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M. W. Southworth

Authorized by
Maurice Southworth
06 Dec 2013

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Inspected by
Tim Meixsell
17 Sep 2015

