

New England Biolabs Certificate of Analysis

Product Name: *Pyrophosphatase, inorganic (yeast)*
Catalog Number: M2403L
Concentration: 100 U/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.
Lot Number: 10051574
Expiration Date: 08/2021
Storage Temperature: -20°C
Storage Conditions: 100 mM KCl, 20 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 8.0 @ 25°C)
Specification Version: PS-M2403S/L v2.0

Pyrophosphatase, inorganic (yeast) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M2403LVIAL	Pyrophosphatase, inorganic (yeast)	10051575	Pass

Assay Name/Specification	Lot # 10051574
Phosphatase Activity (pNPP) A 100 μ l reaction in NEBuffer 3 containing 10 mM p-Nitrophenyl 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
Non-Specific DNase Activity (16 Hour) A 50 μ l reaction in NEBuffer 4 containing 1 μ g 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
Exonuclease Activity (Radioactivity Release) A 50 μ l reaction in NEBuffer 4 containing 1 μ g of a mixture of single and double-stranded [³ H] E. coli 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
dNTPase Activity	Pass

Assay Name/Specification	Lot # 10051574
<p>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 µmol of inorganic phosphate from dNTPs as determined by the AAM assay.</p>	
<p>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.</p>	Pass
<p>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.</p>	Pass

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



Tim Meixsell
Production Scientist
12 Aug 2019



Michael Tonello
Packaging Quality Control Inspector
15 Aug 2019