

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.
Packaging Lot Number: 10061284
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 |

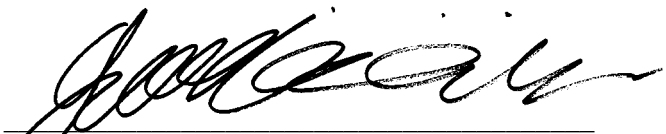
| Assay Name/Specification | Lot # 10061284 |
|---|----------------|
| Non-Specific DNase Activity (16 Hour) A 50 μ l reaction in NEBuffer 4 containing 1 μ g of Lambda DNA and a minimum of 1 unit of Pyrophosphatase, Inorganic (yeast) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass |
| Endonuclease Activity (Nicking) A 50 μ l reaction in NEBuffer 4 containing 1 μ g 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 |
| 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 (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 |
| dNTPase Activity | Pass |

| Assay Name/Specification | Lot # 10061284 |
|--|----------------|
| <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>Phosphatase Activity (pNPP) A 100 µl 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.</p> | Pass |
| <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 4 containing 1 µg of a mixture of single and double-stranded [³H] 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.</p> | Pass |

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



Tim Meixsell
Production Scientist
12 Aug 2019



Jay Minichiello
Packaging Quality Control Inspector
12 Feb 2020