NEW ENGLAND BioLabs Inc.
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Ipswich, MA 01938-2723
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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 µmol of phosphate per minute from inorganic pyrophosphate under standard reaction conditions.*
Packaging Lot Number:	*10145536*
Expiration Date:	*04/2024*
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)	10145535	**Pass**

Assay Name/Specification	**Lot # 10145536**
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 µmol of inorganic phosphate from dNTPs as determined by the AAM assay.	**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 37ºC. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**
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.	**Pass**
Non-Specific DNase Activity (16 Hour)	**Pass**

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Assay Name/Specification	Lot # 10145536
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 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 4 containing 1 µg 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 37ºC releases <0.1% of the total radioactivity.	**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 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Timothy Meixsell
Production Scientist
05 May 2022

Erin Varney
Packaging Quality Control Inspector
05 May 2022