

New England Biolabs Certificate of Analysis

Product Name: *Thermostable Inorganic Pyrophosphatase*
Catalog Number: *M0296L*
Concentration: *2,000 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 (a 10 minute reaction at 75°C in 50 mM Tricine [pH 8.5], 1 mM MgCl₂, 0.32 mM PPI, reaction volume of 0.5 ml).*
Packaging Lot Number: *10160593*
Expiration Date: *07/2024*
Storage Temperature: *-20°C*
Storage Conditions: *20 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 8.0 @ 25°C)*
Specification Version: *PS-M0296S/L v1.0*


Thermostable Inorganic Pyrophosphatase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0296LVIAL	Thermostable Inorganic Pyrophosphatase	10156763	Pass

Assay Name/Specification	Lot # 10160593
<p>Phosphatase Activity (pNPP) A 1 ml reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 10 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 100 units of Thermostable Inorganic Pyrophosphatase incubated for 30 minutes at 75°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	Pass
<p>Exonuclease Activity (Radioactivity Release) A 50 μl reaction in NEBuffer 1 containing 1 μg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of Thermostable Inorganic Pyrophosphatase incubated for 4 hours at 75°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 μl reaction in NEBuffer 2 containing 1 μg of supercoiled PhiX174 DNA and a minimum of 100 units of Thermostable Inorganic Pyrophosphatase incubated for 4 hours at 75°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass

Assay Name/Specification	Lot # 10160593
<p>dNTPase Activity A 500 µl reaction in CircumVent™ Sequencing Buffer in the presence of 200 µM each dNTPs and a minimum of 100 units Thermostable Inorganic Pyrophosphatase incubated for 1 hour at 75°C results in <0.01 µmole of inorganic phosphate from dNTPs as determined by the AAM assay.</p>	<p>Pass</p>

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

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Tim Meixsell
Production Scientist
27 Jul 2022



Michael Tonello
Packaging Quality Control Inspector
14 Sep 2022