

## New England Biolabs Certificate of Analysis

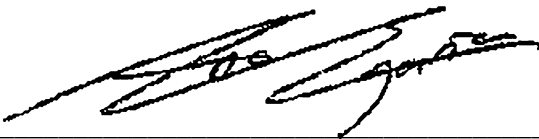
**Product Name:** Apyrase  
**Catalog Number:** M0398S  
**Concentration:** 500 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme that catalyses the release of 1  $\mu$ mol of inorganic phosphate from ATP in 1 minute at 30°C in a total reaction of 50  $\mu$ l.  
**Lot Number:** 10053930  
**Expiration Date:** 04/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 20 mM MES, 50 mM NaCl, 1 mM DTT, 0.1 mM CaCl<sub>2</sub>, 0.1 % Tween® 20, 50 % Glycerol, (pH 6.5 @ 25°C)  
**Specification Version:** PS-M0398S/L v1.0

Apyrase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0398SVIAL	Apyrase	10053928	Pass
B0398SVIAL	Apyrase Reaction Buffer	10020202	Pass

Assay Name/Specification	Lot # 10053930
<b>Endonuclease Activity (Nicking)</b> A 50 $\mu$ l reaction in Apyrase Reaction Buffer containing 1 $\mu$ g of supercoiled PhiX174 DNA and a minimum of 5 units of Apyrase incubated for 4 hours at 30°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 $\mu$ l reaction in Apyrase Reaction Buffer containing 1 $\mu$ g of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 5 units of Apyrase incubated for 4 hours at 30°C releases <0.1% of the total radioactivity.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 $\mu$ l reaction in NEBuffer 4 containing 1 $\mu$ g of PhiX174-HaeIII DNA and a minimum of 5 units of Apyrase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Phosphatase Activity (pNPP)</b> A 200 $\mu$ l reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl <sub>2</sub> containing 2.5 p-Nitrophenyl Phosphate (pNPP) and a minimum of 5 units of Apyrase incubated for 4	Pass

Assay Name/Specification	Lot # 10053930
hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	
<p><b>Protein Purity Assay (SDS-PAGE)</b> Apyrase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b> A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Apyrase is incubated at 37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<b>Pass</b>

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



Ana Egana  
Production Scientist  
07 Oct 2019



Michael Tonello  
Packaging Quality Control Inspector  
07 Oct 2019