

## New England Biolabs Certificate of Analysis

**Product Name:** *Antarctic Phosphatase Reaction Buffer*  
**Catalog #:** B0289S  
**Concentration:** 10X Concentrate  
**Lot #:** 0101709  
**Assay Date:** 09/2017  
**Expiration Date:** 09/2020  
**Storage Temp:** -20°C  
**Composition (1X):** 50 mM Bis-Tris-Propane-HCl, 1 mM MgCl<sub>2</sub>, 0.1 mM ZnCl<sub>2</sub>, (pH 6.0 @ 25°C)  
**Specification Version:** PS-B0289S v1.0  
**Effective Date:** 13 Jun 2018

Assay Name/Specification (minimum release criteria)	Lot #0101709
<b>Endonuclease Activity (Nicking, Buffer)</b> - A 50 µl reaction in 1X Antarctic Phosphatase Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>Functional Testing (Dephosphorylation)</b> - A 23 µl reaction in Antarctic Phosphatase Reaction Buffer containing 1 µg of linear DNA with 5' recessed ends and 1 unit of Antarctic Phosphatase incubated for 30 minutes at 37°C results in ≥95% dephosphorylation as measured by transformation into <i>E. coli</i> .	<b>Pass</b>
<b>Non-Specific DNase Activity (16 hour, Buffer)</b> - A 50 µl reaction in 1X Antarctic Phosphatase Reaction Buffer containing 1 µg of PhiX174-HaeIII DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>RNase Activity (Buffer)</b> - A 10 µl reaction in 1X Antarctic Phosphatase Reaction Buffer containing 40 ng of a 300 base single-stranded RNA is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by polyacrylamide gel electrophoresis.	<b>Pass</b>



Authorized by  
Derek Robinson  
13 Jun 2018



Inspected by  
Ana Egana  
01 Sep 2017

