

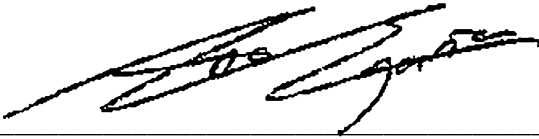
## New England Biolabs Certificate of Analysis

**Product Name:** *Antarctic Phosphatase Reaction Buffer*  
**Catalog Number:** *B0289S*  
**Concentration:** *10 X Concentrate*  
**Packaging Lot Number:** *10068200*  
**Expiration Date:** *12/2022*  
**Storage Temperature:** *-20°C*  
**Specification Version:** *PS-B0289S v1.0*  
**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)*

Antarctic Phosphatase Reaction Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B0289SVIAL	Antarctic Phosphatase Reaction Buffer	10061537	Pass

Assay Name/Specification	Lot # 10068200
<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.	Pass
<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.	Pass
<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.	Pass
<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> .	Pass

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



Ana Egana  
Production Scientist  
04 Mar 2020



Jay Minichiello  
Packaging Quality Control Inspector  
04 Mar 2020