

## New England Biolabs Certificate of Analysis

**Product Name:** *Antarctic Phosphatase Reaction Buffer*  
**Catalog Number:** *B0289S*  
**Concentration:** *10 X Concentrate*  
**Packaging Lot Number:** *10075856*  
**Expiration Date:** *03/2023*  
**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	10068193	Pass

Assay Name/Specification	Lot # 10075856
<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>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>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 E. coli.	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

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



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Ana Egana  
Production Scientist  
22 May 2020



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Michael Tonello  
Packaging Quality Control Inspector  
22 May 2020