

## New England Biolabs Certificate of Analysis

**Product Name:** DNase I Reaction Buffer  
**Catalog Number:** B0303S  
**Concentration:** 10 X Concentrate  
**Packaging Lot Number:** 10250122  
**Expiration Date:** 01/2027  
**Storage Temperature:** -20°C  
**Specification Version:** PS-B0303S v1.0  
**Composition (1X):** 10 mM Tris-HCl, 2.5 mM MgCl<sub>2</sub>, 0.5 mM CaCl<sub>2</sub>, (pH 7.6 @ 25°C)

DNase I Reaction Buffer Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B0303SVIAL	DNase I Reaction Buffer	10225938	Pass

Assay Name/Specification	Lot # 10250122
<b>Endonuclease Activity (Nicking, Buffer)</b> A 50 µl reaction in 1X DNase I 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 (DNaseI Reaction Buffer)</b> A 50 µl reaction in 1X DNase I Reaction Buffer containing 1 µg pBR322 DNA and 1:100 units DNaseI (RNase Free) incubated for 10 minutes at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>Non-Specific DNase Activity (16 hour, Buffer)</b> A 50 µl reaction in 1X DNase I Reaction Buffer containing 1 µg of HaeIII digested PhiX174 RF I 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 DNase I 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>
<b>pH (buffers/solutions)</b> The pH of 10X DNase I Reaction Buffer is between pH 7.5 and 7.7 at 25°C.	<b>Pass</b>

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



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Heidi Church  
Production Scientist  
27 Feb 2024



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Josh Hersey  
Packaging Quality Control Inspector  
22 Jul 2024