

New England Biolabs Certificate of Analysis

Product Name: NEBuffer™ r3.1
Catalog Number: B6003S
Concentration: 10 X Concentrate
Packaging Lot Number: 10176785
Expiration Date: 11/2025
Storage Temperature: -20°C
Specification Version: PS-B6003S v1.0
Composition (1X): 50 mM Tris-HCl, 100 mM NaCl, 10 mM MgCl₂, 100 µg/ml rAlbumin, (pH 7.9 @ 25°C)

NEBuffer™ r3.1 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B6003SVIAL	NEBuffer™ r3.1	10168653	Pass

Assay Name/Specification	Lot # 10176785
RNase Activity (Buffer) A 10 µl reaction in 1X NEBuffer™ r3.1 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 gel electrophoresis using fluorescent detection.	Pass
Endonuclease Activity (Nicking, Buffer) A 50 µl reaction in 1X NEBuffer™ r3.1 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
Conductivity (buffers/solutions) The conductivity of 10X NEBuffer™ r3.1 is between 84 and 101 mS/cm at 25°C.	Pass
Functional Testing (Restriction Digest, Buffer) A 50 µl reaction in 1X NEBuffer™ r3.1 containing 1 µg of Lambda DNA and 1 unit of AseI incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.	Pass
Non-Specific DNase Activity (16 hour, Buffer) A 50 µl reaction in 1X NEBuffer™ r3.1 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

Assay Name/Specification	Lot # 10176785
<p>Functional Testing (Restriction Digest, Buffer) A 50 µl reaction in 1X NEBuffer™ r3.1 containing 1 µg of pBC4 DNA and 1 unit of NotI incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.</p>	Pass
<p>pH (buffers/solutions) The pH of 10X NEBuffer™ r3.1 is between pH 7.8 and 8.0 at 25°C.</p>	Pass

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



Nancy Considine
Production Scientist
21 Nov 2022



Josh Hersey
Packaging Quality Control Inspector
02 Feb 2023