

## New England Biolabs Certificate of Analysis

**Product Name:** NEBuffer™ r2.1  
**Catalog Number:** B6002S  
**Concentration:** 10 X Concentrate  
**Packaging Lot Number:** 10174284  
**Expiration Date:** 10/2025  
**Storage Temperature:** -20°C  
**Specification Version:** PS-B6002S v1.0  
**Composition (1X):** 10 mM Tris-HCl, 50 mM NaCl, 10 mM MgCl<sub>2</sub>, 100 µg/ml rAlbumin, (pH 7.9 @ 25°C)

| NEBuffer™ r2.1 Component List |                       |            |                      |
|-------------------------------|-----------------------|------------|----------------------|
| NEB Part Number               | Component Description | Lot Number | Individual QC Result |
| B6002SVIAL                    | NEBuffer™ r2.1        | 10165693   | Pass                 |

| Assay Name/Specification  | Lot # 10174284 |
|---|----------------|
| <b>Conductivity (buffers/solutions)</b><br>The conductivity of 10X NEBuffer™ r2.1 is between 55 and 62 mS/cm at 25°C.   | Pass           |
| <b>Functional Testing (Restriction Digest, Buffer)</b><br>A 50 µl reaction in 1X NEBuffer™ r2.1 containing 1 µg of Lambda DNA and 1 unit of HindIII incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis. | Pass           |
| <b>Non-Specific DNase Activity (16 hour, Buffer)</b><br>A 50 µl reaction in 1X NEBuffer™ r2.1 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           |
| <b>pH (buffers/solutions)</b><br>The pH of 10X NEBuffer™ r2.1 is between pH 7.8 and 8.0 at 25°C.  | Pass           |
| <b>Functional Testing (Restriction Digest, Buffer)</b><br>A 50 µl reaction in 1X NEBuffer™ r2.1 containing 1 µg of Lambda DNA and 1 unit of SphI incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.    | Pass           |
| <b>Endonuclease Activity (Nicking, Buffer)</b>  | Pass           |

| Assay Name/Specification   | Lot # 10174284     |
|--|--------------------|
| <p>A 50 µl reaction in 1X NEBuffer™ r2.1 containing 1 µg of supercoiled PhiX174 DNA incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> <p><b>RNase Activity (Buffer)</b><br/>A 10 µl reaction in 1X NEBuffer™ r2.1 containing 40 ng of a 300 base single-stranded RNA is incubated at 37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p> | <p><b>Pass</b></p> |

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

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27 Oct 2022



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