Product Name: NEBuffer™ 3.1
Catalog Number: B7203S
Concentration: 10 X Concentrate
Packaging Lot Number: 10063881
Expiration Date: 10/2022
Storage Temperature: -20°C
Specification Version: PS-B7203S v1.0
Composition (1X): 100 mM NaCl, 50 mM Tris-HCl, 10 mM MgCl2, 100 µg/ml BSA, (pH 7.9 @ 25°C)

<table>
<thead>
<tr>
<th>NEB Part Number</th>
<th>Component Description</th>
<th>Lot Number</th>
<th>Individual QC Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>B7203SVIAL</td>
<td>NEBuffer™ 3.1</td>
<td>10053973</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Assay Name/Specification

**RNase Activity (Buffer)**
A 10 µl reaction in 1X NEBuffer 3.1 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 fluorescent detection. **Pass**

**Non-Specific DNase Activity (16 hour, Buffer)**
A 50 µl reaction in 1X NEBuffer 3.1 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**

**pH (buffers/solutions)**
The pH of 10X NEBuffer 3.1 is between pH 7.8 and 8.0 at 25°C. **Pass**

**Endonuclease Activity (Nicking, Buffer)**
A 50 µl reaction in 1X NEBuffer 3.1 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 3.1 is between 84 and 101 mS at 25°C. **Pass**

**Functional Testing (Restriction Digest, Buffer)**

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**New England Biolabs Certificate of Analysis**
## Assay Name/Specification

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<th>Assay Name/Specification</th>
<th>Lot # 10063881</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 50 µl reaction in 1X NEBuffer 3.1 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Functional Testing (Restriction Digest, Buffer)</strong></td>
<td>Pass</td>
</tr>
<tr>
<td>A 50 µl reaction in 1X NEBuffer 3.1 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.</td>
<td></td>
</tr>
</tbody>
</table>

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

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Ben Penta  
Production Scientist  
28 Oct 2019

Michael Tonello  
Packaging Quality Control Inspector  
26 Dec 2019