

## New England Biolabs Certificate of Analysis

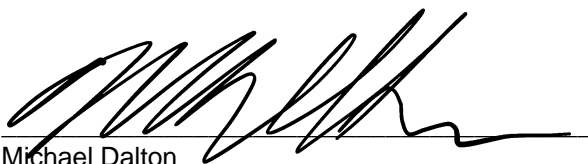
**Product Name:** NEBuffer™ 3.1  
**Catalog Number:** B7203S  
**Concentration:** 10 X Concentrate  
**Packaging Lot Number:** 10070017  
**Expiration Date:** 03/2023  
**Storage Temperature:** -20°C  
**Specification Version:** PS-B7203S v1.0  
**Composition (1X):** 100 mM NaCl, 50 mM Tris-HCl, 10 mM MgCl<sub>2</sub>, 100 µg/ml BSA, (pH 7.9 @ 25°C)

| NEBuffer™ 3.1 Component List |                       |            |                      |
|------------------------------|-----------------------|------------|----------------------|
| NEB Part Number              | Component Description | Lot Number | Individual QC Result |
| B7203SVIAL                   | NEBuffer™ 3.1         | 10072160   | Pass                 |

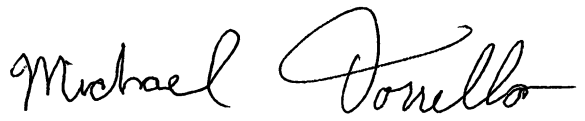
| Assay Name/Specification  | Lot # 10070017 |
|---|----------------|
| <b>Conductivity (buffers/solutions)</b><br>The conductivity of 10X NEBuffer 3.1 is between 84 and 101 mS at 25°C.   | Pass           |
| <b>Endonuclease Activity (Nicking, Buffer)</b><br>A 50 µl reaction in 1X NEBuffer 3.1 containing 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           |
| <b>Functional Testing (Restriction Digest, Buffer)</b><br>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.      | Pass           |
| <b>Functional Testing (Restriction Digest, Buffer)</b><br>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.    | Pass           |
| <b>Non-Specific DNase Activity (16 hour, Buffer)</b><br>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           |

| Assay Name/Specification  | Lot # 10070017 |
|---|----------------|
| <p><b>pH (buffers/solutions)</b><br/>The pH of 10X NEBuffer 3.1 is between pH 7.8 and 8.0 at 25°C.</p>  | <b>Pass</b>    |
| <p><b>RNase Activity (Buffer)</b><br/>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, &gt;90% of the substrate RNA remains intact as determined by fluorescent detection.</p> | <b>Pass</b>    |

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



Michael Dalton  
Production Scientist  
08 Jun 2020



Michael Tonello  
Packaging Quality Control Inspector  
08 Jun 2020