NEW ENGLAND BioLabs Inc.
be INSPIRED drive DISCOVERY stay GENUINE
240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
Fax 978-921-1350
www.neb.com
info@neb.com

# New England Biolabs
# Certificate of Analysis

| | |
|---|---|
| *Product Name:* | *NEBuffer™ 2.1* |
| *Catalog Number:* | *B7202S* |
| *Concentration:* | *10 X Concentrate* |
| *Packaging Lot Number:* | *10065553* |
| *Expiration Date:* | *02/2023* |
| *Storage Temperature:* | *-20°C* |
| *Specification Version:* | *PS-B7202S v1.0* |
| *Composition (1X):* | *50 mM NaCl, 10 mM Tris-HCl, 10 mM MgCl2, 100 µg/ml BSA, (pH 7.9 @ 25°C)* |

| **NEBuffer™ 2.1 Component List** | | | |
|---|---|---|---|
| **NEB Part Number** | **Component Description** | **Lot Number** | **Individual QC Result** |
| B7202SVIAL | NEBuffer™ 2.1 | 10067776 | **Pass** |

| **Assay Name/Specification** | **Lot # 10065553** |
|---|---|
| **RNase Activity (Buffer)**<br>A 10 µl reaction in 1X NEBuffer 2.1 containing 40 ng of a 300 base single-stranded RNA is incubated at 37ºC. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by fluorescent detection. | **Pass** |
| **pH (buffers/solutions)**<br>The pH of 10X NEBuffer 2.1 is between pH 7.8 and 8.0 at 25°C. | **Pass** |
| **Non-Specific DNase Activity (16 hour, Buffer)**<br>A 50 µl reaction in 1X NEBuffer 2.1 containing 1 µg of PhiX174-HaeIII DNA incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | **Pass** |
| **Functional Testing (Restriction Digest, Buffer)**<br>A 50 µl reaction in 1X NEBuffer 2.1 containing 1 µg of Lambda DNA and 1 unit of SphI incubated for 1 hour at 37ºC results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis. | **Pass** |
| **Functional Testing (Restriction Digest, Buffer)**<br>A 50 µl reaction in 1X NEBuffer 2.1 containing 1 µg of Lambda DNA and 1 unit of HindIII incubated for 1 hour at 37ºC results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis. | **Pass** |

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| Assay Name/Specification | Lot # 10065553 |
|---|---|
| **Endonuclease Activity (Nicking, Buffer)**<br>A 50 µl reaction in 1X NEBuffer 2.1 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)**<br>The conductivity of 10X NEBuffer 2.1 is between 55 and 62 mS at 25°C. | **Pass** |

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

Doreen Duquette
Production Scientist
14 Feb 2020

Michael Tonello
Packaging Quality Control Inspector
20 Feb 2020