

New England Biolabs Product Specification

<i>Product Name:</i>	NEBuffer™ 3.1
<i>Catalog #:</i>	B7203S
<i>Concentration:</i>	10X Concentrate
<i>Shelf Life:</i>	36 months
<i>Storage Temp:</i>	-20°C
<i>Composition (1X):</i>	100 mM NaCl, 50 mM Tris-HCl, 10 mM MgCl ₂ , 100 µg/ml BSA, (pH 7.9 @ 25°C)
<i>Specification Version:</i>	PS-B7203S v1.0
<i>Effective Date:</i>	14 Sep 2017

Assay Name/Specification (minimum release criteria)

Conductivity (buffers/solutions) - The conductivity of 10X NEBuffer 3.1 is between 84 and 101 mS at 25°C.

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.

Functional Testing (Restriction Digest, Buffer) - 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.

Functional Testing (Restriction Digest, Buffer) - 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.

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.

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

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.

* The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.



Date 14 Sep 2017

Derek Robinson
Director of Quality Control

