NEBuffer Set 1.1, 2.1, 3.1 & CutSmart™

1-800-632-7799
info@neb.com
www.neb.com

B7200S 0011404170 41

B7200S

1.25 ml of each **Lot: 0011404**

Store at –20°C **Exp: 4/17**

Description: New England Biolabs provides a color-coded 10X NEBuffer with each restriction endonuclease to ensure optimal (100%) activity. Most of our enzymes are supplied with one of four standard NEBuffers. Occasionally, an enzyme has specific buffer requirements not met by one of the four standard NEBuffers, in which case the enzyme is supplied with its own unique NEBuffer.

NEBuffer Color Code:
NEBuffer 1.1: Yellow
NEBuffer 2.1: Blue
NEBuffer 3.1: Red
CutSmart: Green

1X NEBuffer 1.1:
10 mM Bis Tris Propane-HCl
10 mM $MgCl_2$
100 µg/ml BSA
pH 7.0 @ 25°C
Supplied as a 10X concentrated stock

1X NEBuffer 2.1:
50 mM NaCl
10 mM Tris-HCl
10 mM $MgCl_2$
100 µg/ml BSA
pH 7.9 @ 25°C
Supplied as a 10X concentrated stock

1X NEBuffer 3.1:
100 mM NaCl
50 mM Tris-HCl
10 mM $MgCl_2$
100 µg/ml BSA
pH 7.9 @ 25°C
Supplied as a 10X concentrated stock

1X CutSmart Buffer:
50 mM Potassium acetate
20 mM Tris-acetate
10 mM Magnesium acetate
100 µg/ml BSA
pH 7.9 @ 25°C
Supplied as a 10X concentrated stock

Quality Control

pH range: The pH of 10X NEBuffer 1.1 is between pH 6.9 and 7.1. The pH of 10X NEBuffer 2.1, NEBuffer 3.1 and CutSmart Buffer is between pH 7.8 and 8.0.

16-hour Non-specific Nuclease Activity Assay: A 50 µl reaction in 1X NEBuffer containing 1 µg of ϕX HaeIII digested DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Endonuclease (nicking) Activity Assay: A 50 µl reaction in 1X NEBuffer containing 1 µg of supercoiled ϕX174 DNA incubated for 4 hours at 37°C results in < 10% conversion to the nicked form as determined by agarose gel electrophoresis.

Buffer Functional Assay: A 50 µl reaction in 1X NEBuffer containing 1 µg of λ DNA and 1 unit of restriction enzyme, incubated for 1 hour at 37°C results in complete digestion of the substrate DNA as determined by agarose gel electrophoresis.

RNase Activity (Extended Digestion): A 10 µl reaction in 1X NEBuffer with 40 ng RNA transcript is incubated for 16 hours at 37°C. After incubation for 16 hours, no detectable degradation of the RNA is observed as determined by gel electrophoresis using fluorescent detection.

CERTIFICATE OF ANALYSIS

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CUTSMART™ is a trademark of New England Biolabs, Inc.

CERTIFICATE OF ANALYSIS