

## New England Biolabs Product Specification

<i>Product Name:</i>	<i>Gel Loading Dye, Blue (6X)</i>
<i>Catalog #:</i>	<i>B7021S</i>
<i>Concentration:</i>	<i>6X Concentrate</i>
<i>Shelf Life:</i>	<i>36 months</i>
<i>Storage Temp:</i>	<i>25°C</i>
<i>Composition (1X):</i>	<i>2.5% Ficoll®-400, 11 mM EDTA, 3.3 mM Tris-HCl, 0.017% SDS, 0.015% Bromophenol Blue, (pH 8.0 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-B7021S v2.0</i>
<i>Effective Date:</i>	<i>09 May 2018</i>

### Assay Name/Specification (minimum release criteria)

**Endonuclease Activity (Nicking)** - A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 µl of Gel Loading Dye, Blue (6X) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

**Exonuclease Activity (Radioactivity Release)** - A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] *E. coli* DNA and a minimum of 10 µl of Gel Loading Dye, Blue (6X) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

**Non-Specific DNase Activity (16 Hour)** - A 50 µl reaction in CutSmart® Buffer containing 1 µg of digested 1 kb Plus DNA Ladder DNA and a minimum of 10 µl of Gel Loading Dye, Blue (6X) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

**RNase Activity (Extended Digestion)** - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Gel Loading Dye, Blue (6X) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.



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