

## New England Biolabs Product Specification

<i>Product Name:</i>	<i>Blue Protein Loading Dye</i>
<i>Catalog #:</i>	<i>B7703S</i>
<i>Concentration:</i>	<i>3X Concentrate</i>
<i>Shelf Life:</i>	<i>36 months</i>
<i>Storage Temp:</i>	<i>-20°C</i>
<i>Composition (1X):</i>	<i>187.5 mM Tris-HCl, 6 % (w/v) SDS, 30 % Glycerol, 0.03 % Bromophenol Blue, (pH 6.8 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-B7703S v2.0</i>
<i>Effective Date:</i>	<i>16 Aug 2019</i>

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

**Electrophoretic Pattern** - The components of the Blue Protein Loading Dye are tested to ensure the banding pattern of an NEB protein ladder on a 10-20% Tris-Glycine gel shows discrete, clearly identifiable bands at each size fragment of the marker when stained with Coomassie Blue at a concentration of 0.1%.

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

**Non-Specific DNase Activity (16 Hour)** - A 50 µl reaction in CutSmart® Buffer containing 1 µg of 1 kb Plus DNA Ladder DNA and a minimum of 5 µl of Blue Protein Loading Dye 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 Blue Protein Loading Dye 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.



Date 16 Aug 2019

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Director of Quality Control

