

## New England Biolabs Certificate of Analysis

**Product Name:** *Blue Protein Loading Dye*  
**Catalog Number:** *B7703S*  
**Packaging Lot Number:** *10205090*  
**Expiration Date:** *01/2026*  
**Storage Temperature:** *-20°C*  
**Specification Version:** *PS-B7703S v2.0*  
**Composition (1X):** *187.5 mM Tris-HCl, 6 % (w/v) SDS, 30 % Glycerol, 0.03 % Bromophenol Blue, (pH 6.8 @ 25°C)*

Blue Protein Loading Dye Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B7705SVIAL	30X Reducing Agent	10177020	Pass
B7703SVIAL	Blue Protein Loading Dye	10173662	Pass

Assay Name/Specification	Lot # 10205090
<p><b>Electrophoretic Pattern</b> 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%.</p>	<b>Pass</b>
<p><b>Endonuclease Activity (Nicking)</b> 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 &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><b>Non-Specific DNase Activity (16 Hour)</b> 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.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b> 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, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<b>Pass</b>

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

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Nancy Considine  
Production Scientist  
06 Mar 2023



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Michael Tonello  
Packaging Quality Control Inspector  
21 Sep 2023