

## New England Biolabs Certificate of Analysis

**Product Name:** Gel Loading Dye Orange (6X)  
**Catalog Number:** B7022S  
**Concentration:** 6 X Concentrate  
**Packaging Lot Number:** 10261904  
**Expiration Date:** 11/2025  
**Storage Temperature:** 25°C  
**Specification Version:** PS-B7022S v2.0  
**Composition (1X):** 2.5 % Ficoll® 400, 11 mM EDTA, 3.3 mM Tris-HCl, 0.017 % SDS, 0.15 % Orange G, (pH 8.0 @ 25°C)

Gel Loading Dye Orange (6X) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
B7022SVIAL	Gel Loading Dye, Orange (6X)	10170731	Pass

Assay Name/Specification	Lot # 10261904
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in 1X CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 µl of Gel Loading Dye, Orange (6X) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in 1X 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, Orange (6X) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	<b>Pass</b>
<b>Non-Specific DNase Activity (16 Hour)</b> 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, Orange (6X) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>RNase Activity (Extended Digestion)</b> A 10 µl reaction in 1X NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µL of Gel Loading Dye, Orange (6X) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using agarose gel electrophoresis.	<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  
17 Nov 2022



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Josh Hersey  
Packaging Quality Control Inspector  
11 Oct 2024