

## New England Biolabs Certificate of Analysis

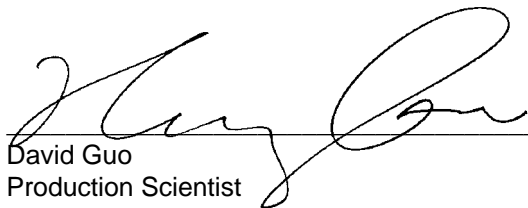
**Product Name:** 7-deaza-dGTP  
**Catalog Number:** N0445S  
**Concentration:** 5 mM  
**Unit Definition:** N/A  
**Lot Number:** 10055524  
**Expiration Date:** 08/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** Supplied in Ultrapure water as a lithium salt , (pH 7.0)  
**Specification Version:** PS-N0445S/L v1.0

7-deaza-dGTP Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
N0445SVIAL	7-deaza-dGTP	10053238	Pass

Assay Name/Specification	Lot # 10055524
<p><b>PCR Amplification (0.5 kb Lambda DNA, 7-deaza)</b>            A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM dATP, dCTP, dTTP and 7-deaza-dGTP, 0.5 µM primers containing 1 ng Lambda DNA with 5 units of Taq® DNA Polymerase for 25 cycles of PCR amplification results in the expected 0.5 kb product.</p>	Pass
<p><b>PCR Amplification (2 kb Lambda DNA, 7-deaza)</b>            A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM dATP, dCTP, dTTP and 7-deaza-dGTP, 0.5 µM primers containing 1 ng Lambda DNA with 5 units of Taq® DNA Polymerase for 25 cycles of PCR amplification results in the expected 2 kb product.</p>	Pass
<p><b>PCR Amplification (5 kb Lambda DNA, 7-deaza)</b>            A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM dATP, dCTP, dTTP and 7-deaza-dGTP, 0.5 µM primers containing 1 ng Lambda DNA with 5 units of Taq® DNA Polymerase for 25 cycles of PCR amplification results in the expected 5 kb product.</p>	Pass
<p><b>Phosphatase Activity (pNPP)</b>            A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl<sub>2</sub> containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 80 µl 7-deaza-dGTP incubated for 4 hours at 37°C yields &lt;0.0001 unit of alkaline phosphatase activity as determined by</p>	Pass

Assay Name/Specification	Lot # 10055524
spectrophotometric analysis.	
<b>Physical Purity (HPLC)</b> 7-deaza-dGTP is $\geq 95\%$ pure as determined by HPLC analysis.	<b>Pass</b>
<b>RNase Activity (Extended Digestion)</b> A 10 $\mu$ l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 $\mu$ l of 7-deaza-dGTP 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.	<b>Pass</b>
<b>Endonuclease Activity (Nicking)</b> A 50 $\mu$ l reaction in NEBuffer 2 containing 1 $\mu$ g of supercoiled PhiX174 DNA and a minimum of 20 $\mu$ l of 7-deaza-dGTP 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>Non-Specific DNase Activity (16 Hour)</b> A 50 $\mu$ l reaction in NEBuffer 2 containing 1 $\mu$ g of T3 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 5 $\mu$ l of 7-deaza-dGTP 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>

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



David Guo  
Production Scientist  
09 Sep 2019



Michael Tonello  
Packaging Quality Control Inspector  
11 Sep 2019