NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*7-deaza-dGTP*
Catalog Number:	*N0445L*
Concentration:	*5 mM*
Unit Definition:	*N/A*
Lot Number:	*10038665*
Expiration Date:	*01/2021*
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**
N0445LVIAL	7-deaza-dGTP	10038668	**Pass**

Assay Name/Specification	**Lot # 10038665**
PCR Amplification (2 kb Lambda DNA, 7-deaza) 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.	**Pass**
PCR Amplification (0.5 kb Lambda DNA, 7-deaza) 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.	**Pass**
PCR Amplification (5 kb Lambda DNA, 7-deaza) 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.	**Pass**
Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl2 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 <0.0001 unit of alkaline phosphatase activity as determined by	**Pass**

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Assay Name/Specification	Lot # 10038665
spectrophotometric analysis.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 5 µl of 7-deaza-dGTP incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 20 µl of 7-deaza-dGTP incubated for 4 hours at 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Physical Purity (HPLC) 7-deaza-dGTP is ≥ 95% pure as determined by HPLC analysis.	**Pass**
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 7-deaza-dGTP is incubated at 37ºC. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**

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

Doreen Duquette
Production Scientist
08 Mar 2019

Michael Tonello
Packaging Quality Control Inspector
11 Mar 2019