

New England Biolabs Certificate of Analysis

Product Name: Deoxynucleotide (dNTP) Solution Set
Catalog Number: N0446S
Concentration: 100 mM
Unit Definition: N/A
Packaging Lot Number: 10106983
Expiration Date: 01/2023
Storage Temperature: -20°C
Storage Conditions: Supplied in Ultrapure water as a sodium salt (pH 7.5)
Specification Version: PS-N0446S v2.0

Deoxynucleotide (dNTP) Solution Set Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
N0443SVIAL	dTTP	10092822	Pass
N0442SVIAL	dGTP	10092821	Pass
N0441SVIAL	dCTP	10092820	Pass
N0440SVIAL	dATP Solution	10092819	Pass

Assay Name/Specification	Lot # 10106983
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 10 µl of dATP, dCTP, dGTP, and dTTP incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	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 dATP, dCTP, dGTP, and dTTP 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.	Pass
Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 4 µl dATP, dCTP, dGTP, and dTTP incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
Physical Purity (HPLC)	Pass

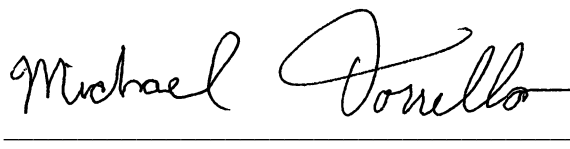
Assay Name/Specification	Lot # 10106983
dATP, dCTP, dGTP, and dTTP is $\geq 99\%$ pure as determined by HPLC analysis.	
<p>PCR Amplification (2.0 kb Lambda, dNTPs) A 50 μl reaction in ThermoPol® Reaction Buffer in the presence of 200 μM dATP, dCTP, dGTP, and dTTP and 0.5 μM primers containing 1 ng Lambda DNA with 1.25 units of Taq DNA Polymerase for 25 cycles of PCR amplification results in the expected 2.0 kb product.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 μl reaction in NEBuffer 2 containing 1 μg of supercoiled PhiX174 DNA and a minimum of 1 μl of dATP, dCTP, dGTP, and dTTP incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>PCR Amplification (0.5 kb Lambda, dNTPs) A 50 μl reaction in ThermoPol® Reaction Buffer in the presence of 200 μM dATP, dCTP, dGTP, and dTTP and 0.5 μM primers containing 1 ng Lambda DNA with 1.25 units of Taq DNA Polymerase for 25 cycles of PCR amplification results in the expected 0.5 kb product.</p>	Pass
<p>PCR Amplification (5.0 kb Lambda, dNTPs) A 50 μl reaction in ThermoPol® Reaction Buffer in the presence of 200 μM dATP, dCTP, dGTP, and dTTP and 0.5 μM primers containing 1 ng Lambda DNA with 1.25 units of Taq DNA Polymerase for 25 cycles of PCR amplification results in the expected 5.0 kb product.</p>	Pass

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

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19 Apr 2021



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19 Apr 2021