

New England Biolabs Certificate of Analysis

Product Name: Deoxynucleotide (dNTP) Solution Mix
Catalog #: N0447S/L
Concentration: 10 mM each dNTP
Unit Definition: N/A
Lot #: 0811509
Assay Date: 09/2015
Expiration Date: 09/2017
Storage Temp: -20°C
Storage Conditions: Supplied in Ultrapure water as a sodium salt (pH 7.5)
Specification Version: PS-N0447S/L v2.0
Effective Date: 20 Aug 2015

Assay Name/Specification (minimum release criteria)	Lot #0811509
Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 µl of Deoxynucleotide (dNTP) Solution Mix incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
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 10 µl of Deoxynucleotide (dNTP) Solution Mix incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
PCR Amplification (0.5 kb Lambda, dNTPs) - A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM Deoxynucleotide (dNTP) Solution Mix and 0.5 µM primers containing 1 ng Lambda DNA with 1.25 units of <i>Taq</i> DNA Polymerase for 25 cycles of PCR amplification results in the expected 0.5 kb product.	Pass
PCR Amplification (2.0 kb Lambda, dNTPs) - A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM Deoxynucleotide (dNTP) Solution Mix and 0.5 µM primers containing 1 ng Lambda DNA with 1.25 units of <i>Taq</i> DNA Polymerase for 25 cycles of PCR amplification results in the expected 2.0 kb product.	Pass
PCR Amplification (5.0 kb Lambda, dNTPs) - A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM Deoxynucleotide (dNTP) Solution Mix and 0.5 µM primers containing 1 ng Lambda DNA with 1.25 units of <i>Taq</i> DNA Polymerase for 25 cycles of PCR amplification results in the expected 5.0 kb product.	Pass
Phosphatase Activity (pNPP) - A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM <i>p</i> -Nitrophenol Phosphate (pNPP) and a minimum of 40 µl Deoxynucleotide (dNTP) Solution Mix incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass



