

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 #: 0721306
Assay Date: 06/2013
Expiration Date: 06/2015
Storage Temp: -20 °C
Storage Conditions: Supplied in Ultrapure water as a sodium salt (pH 7.5)
Specification Version: PS-N0447S/L v1.0
Effective Date: 13 Jan 2014

| Assay Name/Specification (minimum release criteria) | Lot #0721306 |
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| Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or HindIII-digested Lambda 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 (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 unit of <i>Taq</i> DNA Polymerase for 25 cycles of PCR amplification results in the expected 2.0 kb product. | Pass |
| PCR Amplification (500 bp 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 unit of <i>Taq</i> DNA Polymerase for 25 cycles of PCR amplification results in the expected 500 bp 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 unit 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 50 µl reaction in Protein Phosphatase Buffer containing 100 µM <i>p</i> -Nitrophenol Phosphate (pNPP) and a minimum of 2 mM 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 |
| Physical Purity (HPLC) - Deoxynucleotide (dNTP) Solution Mix is ≥ 99% pure as determined by HPLC analysis. | Pass |



Authorized by
Derek Robinson
13 Jan 2014



Inspected by
Melanie Fortier
14 Jan 2014

