

## 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 #:
 0791506

 Assay Date:
 06/2015

 Expiration Date:
 6/2017

 Storage Temp:
 -20°C

Storage Conditions: Supplied in Ultrapure water as a sodium salt (pH 7.5)

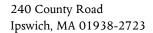
Specification Version: PS-N0447S/L v1.0
Effective Date: 15 May 2015

Assay Name/Specification (minimum release criteria)	Lot #0791506
Non-Specific DNase Activity (16 Hour) - A 50 $\mu$ l reaction in NEBuffer 2 containing 1 $\mu$ g of T3 or HindIII-digested Lambda DNA and a minimum of 10 $\mu$ l 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 $\mu$ l reaction in Protein Phosphatase Buffer containing 100 $\mu$ M $p$ -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
<b>Physical Purity (HPLC)</b> - Deoxynucleotide (dNTP) Solution Mix is ≥ 99% pure as determined by HPLC analysis.	Pass

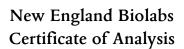








Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com



Authorized by Melanie Fortier

15 May 2015





NEW ENGLAND
BioLabs Inc.



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Inspected by Christie Vazquez 28 May 2015