

## 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 #:** *0751404*  
**Assay Date:** *04/2014*  
**Expiration Date:** *4/2016*  
**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:** *22 Apr 2014*

Assay Name/Specification (minimum release criteria)	Lot #0751404
<p><b>Non-Specific DNase Activity (16 Hour)</b> - 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.</p>	<b>Pass</b>
<p><b>PCR Amplification (2.0 kb Lambda, dNTPs)</b> - 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.</p>	<b>Pass</b>
<p><b>PCR Amplification (500 bp Lambda, dNTPs)</b> - 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.</p>	<b>Pass</b>
<p><b>PCR Amplification (5.0 kb Lambda, dNTPs)</b> - 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.</p>	<b>Pass</b>
<p><b>Phosphatase Activity (pNPP)</b> - 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 &lt;0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	<b>Pass</b>
<p><b>Physical Purity (HPLC)</b> - Deoxynucleotide (dNTP) Solution Mix is ≥ 99% pure as determined by HPLC analysis.</p>	<b>Pass</b>



**New England Biolabs  
Certificate of Analysis**



Authorized by  
Melanie Fortier  
22 Apr 2014



Inspected by  
Jessica Cane  
23 Apr 2014

