

## 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 #:** 0721309  
**Assay Date:** 09/2013  
**Expiration Date:** 09/2015  
**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 #0721309
<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.	<b>Pass</b>
<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.	<b>Pass</b>
<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.	<b>Pass</b>
<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.	<b>Pass</b>
<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 <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	<b>Pass</b>
<b>Physical Purity (HPLC)</b> - Deoxynucleotide (dNTP) Solution Mix is ≥ 99% pure as determined by HPLC analysis.	<b>Pass</b>



Authorized by  
Derek Robinson  
13 Jan 2014



Inspected by  
Melanie Fortier  
14 Jan 2014

