

## Deoxynucleotide (dNTP) Solution Set



1-800-632-7799  
info@neb.com  
www.neb.com



N0446S 051130615061

# N0446S

**25 µmol each dNTP** Lot: **0511306**  
**Store at -20°C** Exp: **6/15**

**Description:** The Deoxynucleotide (dNTP) Solution Set contains 0.25 ml of each 100 mM ultrapure deoxynucleotide as four separate solutions (dATP, dCTP, dGTP and dTTP).

Supplied in: Ultrapure water as a sodium salt at pH 7.5.

**Concentration:** Each deoxynucleotide is supplied at a concentration of 100 mM ( $\pm 5$  mM) as determined by  $A_{260}$  absorbance.

<b>Reagents Supplied:</b>	
100 mM dATP Solution	0.25 ml
100 mM dCTP Solution	0.25 ml
100 mM dGTP Solution	0.25 ml
100 mM dTTP Solution	0.25 ml

**Diluent Compatibility:** Can be diluted using sterile distilled water, preferably Milli-Q® water or can be diluted using sterile TE [10 mM Tris-HCl, 1 mM EDTA (pH 7.5)].

### Quality Controls

The purity of each deoxynucleotide is  $\geq 99\%$  as determined by HPLC analysis.

**0.5 kb, 2 kb and 5 kb Lambda PCR Assay –** 25 cycles of PCR amplification of 1 ng Lambda DNA with 5 units of *Taq* DNA Polymerase in the presence of 200 µM dATP, dCTP, dGTP and dTTP 0.5 µM primers and 1X ThermoPol™ Buffer results in the amplification of the specific 0.5 kb, 2 kb and 5 kb products as determined by agarose gel electrophoresis.

**Phosphatase Activity Assay (pNPP Colorimetric Assay) –** A protein phosphatase buffer solution containing 2 mM dATP, dCTP, dGTP or dTTP solution and 100 µM *p*-nitrophenol phosphate, incubated for 4 hours at 37°C, yields no detectable phosphatase activity as determined by spectrophotometric analysis of released *p*-nitrophenylene anion at 405 nm.

**Non-specific Nuclease Assay –** A 50 µl reaction in 1X NEBuffer 2 containing 1 µg of T3 DNA or HindIII digested Lambda DNA and a minimum of 10 µl of dATP, dCTP, dGTP or dTTP Solution incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

For use with any DNA Polymerase from NEB.

### Companion Products Sold Separately:

Deoxynucleotide (dNTP) Solution Mix  
#N0447S 8 µmol of each  
#N0447L 40 µmol of each

dATP Solution  
#N0440S 25 µmol

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CERTIFICATE OF ANALYSIS

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dATP Solution  
#N0440S 25 µmol

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