Deoxynucleotide (dNTP) Solution Mix

**N0447S**

8 µmol each dNTP  Lot: 0791506
Store at –20°C  Exp: 6/17

**Description:** Deoxynucleotide (dNTP) Solution Mix is an equimolar solution of ultrapure 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 10 mM in an equimolar solution containing a total deoxynucleotide concentration of 40 mM.

Reagents Supplied:
10 mM Deoxynucleotide Solution Mix 4 x 0.2 ml

**Example of Use:** For a reaction which calls for 200 µM of each dNTP, add 2 µl of this premixed deoxynucleotide solution per 100 µl reaction.

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

**Quality Controls**

The purity of each deoxynucleotide is ≥ 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 Deoxynucleotide Solution Mix, 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.

For use with any DNA Polymerase from NEB.

Phosphatase Activity Assay (pNPP Colorimetric Assay) – A protein phosphatase buffer solution containing 2 mM Deoxynucleotide Solution Mix 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 Deoxynucleotide 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.

For use with any DNA Polymerase from NEB.

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Companion Products Sold Separately:
Deoxynucleotide (dNTP) Solution Set
#N0446S 25 µmol of each
dATP Solution
#N0440S 25 µmol

each

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