

Deoxynucleotide Solution Mix



N0447S 070120614062

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

N0447S

8 µmol each dNTP

Lot: 0701206

Store at -20°C

Exp: 6/14

Description: Deoxynucleotide 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 a equimolar solution containing a total nucleotide concentration of 40 mM.

Now Supplied as 4 x 0.2 ml

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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 nucleotide 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-HCl, 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.

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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.

Notes: Storing nucleotide triphosphates in solutions containing magnesium promotes triphosphate degradation.

For use with any DNA Polymerases from NEB.

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Companion Products Sold Separately:

Deoxynucleotide Solution Set #N0446S 25 µmol of each
dATP Solution #N0440S 25 µmol

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MILLI-Q® is a registered trademark of Millipore Corporation.



CERTIFICATE OF ANALYSIS

Companion Products Sold Separately:

Deoxynucleotide Solution Set #N0446S 25 µmol of each
dATP Solution #N0440S 25 µmol

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CERTIFICATE OF ANALYSIS