Product Information

dNTP mixture

PRODUCT NAME: DEOXYNUCLEOTIDE (dNTP) MIX,
10 mM Solution, PCR Reagent
Product No. **DD0056**

Product Summary
DNase, RNase: None detected.

Suitable for use in the Polymerase Chain Reaction (PCR).

dNTP Mix is a solution containing each of the four deoxynucleotides as follows:

10 mM dATP
10 mM dCTP
10 mM dGTP
10 mM dTTP

PCR Suitability

dNTP Mix was tested at a final concentration of 200 µM in a reaction mixture containing10 mM Tris-HCl, pH 8.3 at 25 °C, 50 mM KCl, 1.5 mM MgCl2, 0.001% (w/v) gelatin, primers defining an approximately 500 base pair region of λ DNA at 1.0 µM each, λ DNA template at 1 ng/100 µl, and *Taq* DNA polymerase at 2.5 units/100 µl. The reaction underwent 25 cycles of 94 °C to denature the double stranded DNA, 55 °C to anneal the DNA segments, and 72 °C to extend the DNA segments. A single band of approximately 500 base pairs was visualized following electrophoresis of the reaction product in a 1.5% agarose gel.

Endonuclease-Exonuclease

One µg of λ Hind III fragments was incubated for 16 hours at 37 °C with dNTP Mix at a final concentration of 5 mM in a 50 µl reaction mixture containing 30 mM Tris-HCl, pH 7.8, 50 mM NaCl and 10 mM MgCl2. No degradation of the DNA fragments was detected following agarose gel electrophoresis. Detection limit: Degradation of 10% of the DNA substrate is detectable.

Endonuclease (Nickase)

One µg of pBR322 DNA was incubated for 16 hours at 37 °C with dNTP Mix at a final concentration of 5 mM in a 50 µl reaction mixture containing 30 mM Tris-HCl, pH 7.8, 50 mM NaCl and 10 mM MgCl2. No conversion of the covalently closed circular DNA to the nicked or linear form was observed following agarose gel electrophoresis. Detection limit: Conversion of 1% of the DNA substrate is detectable.

RNase

Two µg of transfer RNA were incubated for 16 hours at 37 °C with dNTP Mix at a final concentration of 5 mM in a 50 µl reaction mixture containing 30 mM Tris-HCl, pH 7.8, 50 mM NaCl and 10 mM MgCl2. No degradation of the tRNA was detected following polyacrylamide gel electrophoresis. Detection limit: Degradation of 10% of the tRNA substrate is detectable.

Storage: Store at less than –20 °C