dNTP Mix, 10mM each

Store at -20°C

Cat.No: **BADTP01611**

Pack size: 1ml

Description: The BioArtis dNTP mix comprises an aqueous solution containing dATP, dCTP, dGTP, and dTTP, each present at a final concentration of 10mM. This mixture provides the opportunity to reduce the likelihood of errors and improve the overall reliability in molecular biology experiments

Applications: Several of our use cases include applications in PCR, RT-PCR, high-fidelity and long-range PCR, LAMP-PCR, cDNA synthesis, DNA labeling, and DNA sequencing

CERTIFICATE OF ANALYSIS:

- Purity is ≥99% for each dNTP mix preparation
- PH is 7.3-7.5 for each dNTP, used for dNTP mix preparation

Endo-and exonucleases: To prepare the dNTP mix, each individual dNTP underwent testing through incubation with single-stranded and double-stranded radiolabeled oligonucleotides. Specifically, 1ul of a 20mM dNTP solution was incubated for 4 hours at 37°C, and the resulting reaction mixtures were separated on a denaturing polyacrylamide gel. Notably, phosphoimaging revealed no detectable DNA degradation.

Ribonucleases: In testing for dNTP mix preparation, each dNTP was incubated with a 2000-base RNA transcript using 1ul of 20mM dNTP at 37°C for 4 hours. Gel separation revealed no decrease in RNA transcript band intensity compared to the control, indicating the maintenance of RNA integrity.

Nicking activities: EachdNTP, used for dNTP mix preparation, was tested by incubation of 1ug of supercoiled pUC19 DNA with 2ul of 20mM dNTP at 37°C for 17hours and separation of reaction mixtures on an agarose gel. Neither linearized plasmid, nor relaxation of supercoiled plasmid was detected as compared to control.

E.coli DNA: Absence of any E.coli DNA was confirmed by Quantitative PCR test on ABI Quant Studio 5 , which uses amplification of E.coli 23S rRNA gene fragment to detect E.coli DNA.

Human DNA: Absence of any E.coli DNA was confirmed by Quantitative PCR test on ABI Quant Studio 5 , which uses amplification of RNSp gene fragment to detect Human DNA.

Functional test:

1. PCR amplified a 1kb fragment of a single-copy gene from 10 copies of human genomic DNA using Phusion DNA polymerase.
2. PCR amplified a 5kb DNA fragment from a series of lambda DNA dilutions using Phusion DNA polymerase.

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