

**Description:** dNTPs are the building material for DNA molecule and used in various assays based on PCR. The purity of dNTPs is highly important for assay results' accuracy. The dNTPs synthesis itself doesn't except the presence of contaminants (such as NTPs, modified nucleotides, dNDPs, dNMPs, heavy/transition metals) in resulting solution, which can extremely affect the experiment by PCR inhibition.

The use of a highly purified dNTP preparation is particularly recommended for sensitive techniques such as long-range PCR, RT-PCR, multiplex, mutagenesis experiments and Real-Time applications. HPLC is a suitable method of testing dNTP purity. dNTPs offered are HPLC tested and can be employed in highly sensitive assays.

### Content

Ref No.	S110001	110001	110002	color
Mix dNTPs 10 mM each *	Sample size	200 µL	1000 µL	yellow
Datasheet	1	1	1	--

\* pre-mixed solution of sodium salts of dATP, dCTP, dGTP and dTTP, 10 mM each, pH is adjusted to pH 7.5

**Applications:** The deoxynucleotides, PCR grade are suitable for many applications where high-quality reagents are required. Such procedures include reverse transcription (RT), polymerase chain reaction (PCR), RT-PCR, DNA labeling reactions and sequencing/cycle sequencing analysis.

All deoxynucleoside triphosphates are produced by the highly effective new chemical method developed in-house.

**Concentration:** premixed solution (ready-to-use) in water of sodium salts of dATP, dCTP, dGTP and dTTP each at a concentration 10 mM. pH is adjusted to 7.5.

### Quality Control

- HPLC analysis (>98%); Not more than 5% of dNDPs were found by HPLC
- NMR analysis (inorganic phosphates)
- Exo-endo deoxyribonucleases contamination test
- UV-Spectral analysis
- Spectrophotometry
- Production of 8kb PCR fragment from genomic DNA with *Taq* DNA polymerase
- Production of 0,6kb PCR fragment from genomic DNA with *Pfu* DNA polymerase

**Recommended concentration:** The solution is ready for use and is optimized for PCR. Use 1 µL of 4 you 4 dNTPs mix in 50 µL reaction volume (this equals a concentration of 200 µM each dNTP).

**Storage:** -20 °C. Avoid multiple freeze-thawing. For long-term usage, aliquoting is recommended.