

# dNTP Set

For Research Use Only

**Product:** dNTP Set, Molecular Biology Grade

**Cat. No.:** MM2131

**Concentration:** 1.0 mM

**Store at** -20 °C

200 µl aqueous solutions of dATP, dCTP, dGTP and dTTP each in 5 separate vials

**Shipment:** Dry or Wet ice

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**Description:**

The set consists of 1.0 mM aqueous solutions of dATP, dCTP, dGTP and dTTP each in a separate vial. Since the nucleotides are provided as separate solutions, the dNTP Set offers maximum flexibility in preparation of reaction mixes for different applications.

**Applications:**

For use in PCR, long PCR, RT-PCR, cDNA synthesis, primer extension, DNA sequencing, DNA labeling.

**General Characteristics:**

**dATP**  $C_{10}H_{17}N_5O_{11}P_3Na_4$

MW = 507.7

$\lambda_{max}$  = 209 nm

$\epsilon$  =  $1.0 \times 10^5 M^{-1}cm^{-1}$  at pH 7.0

**dCTP**  $C_{15}H_{17}N_7O_{11}P_3Na_4$

MW = 533.1

$\lambda_{max}$  = 211 nm

$\epsilon$  =  $9.3 \times 10^4 M^{-1}cm^{-1}$  at pH 7.0

**dGTP**  $C_{17}H_{17}N_9O_{11}P_3Na_4$

MW = 573.7

$\lambda_{max}$  = 207 nm

$\epsilon$  =  $1.3 \times 10^5 M^{-1}cm^{-1}$  at pH 7.0

**dTTP**  $C_{15}H_{15}N_5O_{11}P_3Na_4$

MW = 548.1

$\lambda_{max}$  = 216 nm

$\epsilon$  =  $9.7 \times 10^4 M^{-1}cm^{-1}$  at pH 7.0

**Quality Control Assay Data**

Method	Specification	Result
<b>Purity Assay</b>		
HPLC column C18/A; detection UV (at Corresponding $\lambda_{max}$ ); Mobile Phase: A=TEEA 0.1M, pH 7.0; B= 7.0% CH3CN/ H2O	>98%	dATP 98.82% dCTP 98.92% dGTP 98.74% dTTP 98.29%
LO test (test for detection of exo-, endo-deoxyribonuclease and phosphatase contaminations)	Not detectable	Passed
Ribonuclease assay (test for detection of RNase contaminants using Hr RNA as a substrate)	Not detectable	Passed
<b>Function Assay</b>		
PCR with Pfu DNA Polymerase	1000 bp from 1ng of genomic DNA	Passed
PCR with Taq DNA Polymerase	1000 bp from 1ng of genomic DNA	Passed
<b>pH</b>		
	7.0 - 7.0	7.0
<b>Concentration</b>		
<b>Spectrometry</b>	1.00 ± 0.05 mM	dATP 1.00 mM dCTP 1.00 mM dGTP 1.00 mM dTTP 0.99 mM

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