



dNTP Set

For Research Use Only

Product: dNTP Set, Molecular Biology Grade

Cat. No.: MM2131

Concentration: 100mM

Store at -20°C

250µl aqueous solutions of dATP, dCTP, dGTP and dTTP each in 4 separate vials

Shipment: Dry or Wet ice

Description:

The set consists of 100mM 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 C₁₀H₁₃N₅O₁₂P₃Na₃

MW = 557.2

λ_{max} = 259nm

ε = 15.2×10³M⁻¹cm⁻¹ at pH 7.0

dCTP C₉H₁₃N₃O₁₃P₃Na₃

MW = 533.1

λ_{max} = 271nm

ε = 9.3×10³M⁻¹cm⁻¹ at pH 7.0

dGTP C₁₀H₁₃N₅O₁₃P₃Na₃

MW = 573.2

λ_{max} = 253nm

ε = 13.7×10³M⁻¹cm⁻¹ at pH 7.0

dTTP C₁₀H₁₄N₂O₁₄P₃Na₃

MW = 548.1

λ_{max} = 267nm

ε = 9.6×10³M⁻¹cm⁻¹ at pH 7.0

Quality Control Assay Data

Method	Specification	Result
Purity Assay		
HPLC column C2/C18; detection UV (at Corresponding λ _{max}); Mobile Phase: A=TEEA 0.1M, pH 7.0; B= 60% CH ₃ CN/ H ₂ O	>98%	dATP 98.82% dCTP 98.93% dGTP 98.64% 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 H ₃ RNA as a substrate)	Not detectable	Passed
Function Assay		
PCR with Pfu DNA Polymerase	1000 bp from 2ng of genomic DNA	Passed
PCR with Taq DNA Polymerase	1000 bp from 2ng of genomic DNA	Passed
pH		
	6.5 - 7.0	7.0
Concentration		
Spectrometry	100 ± 5mM	dATP 100mM dCTP 100mM dGTP 102mM dTTP 99mM

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