Data Sheet (26.11.2020)

dNTP Set

Package sizes:

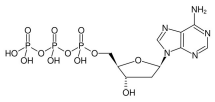
Cat.-No.	Amount
mi-N1005S	4 x 200 µl (4 x 20 µmol)
mi-N1005L	4 x 1000 µl (4 x 100 µmol)

Storage conditions: - 20 ± 5°C
Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery

For research use only! ***Only for* in vitro *use!***

dATP Structure:



Molecular Formula: $C_{10}H_{16}N_5O_{12}P_3$ (free acid)
Molecular Weight: 491.18 g/mol (free acid)

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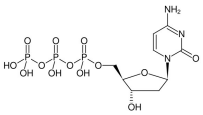
dCTP Structure:



Molecular Formula: $C_9H_{16}N_3O_{13}P_3$ (free acid)
Molecular Weight: 467.15 g/mol (free acid)

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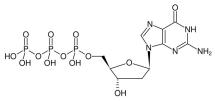
dGTP Structure:



Molecular Formula: $C_{10}H_{16}N_5O_{13}P_3$ (free acid)
Molecular Weight: 507.18 g/mol (free acid)

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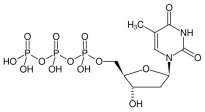
dTTP Structure:



Molecular Formula: $C_{10}H_{17}N_2O_{14}P_3$ (free acid)
Molecular Weight: 482.17 g/mol (free acid)

Purity: ≥ 99 % (HPLC)

Form: clear aqueous solution

Concentration: 100 mM - 110 mM

pH: 8.5 ±0.2 (22 °C)

Spectroscopic Properties:
dATP: λmax 259 nm, ε 15.4 L mmol-1 cm-1 (Tris-HCl pH 7.0)
dCTP: λmax 271 nm, ε 8.9 L mmol-1 cm-1 (Tris-HCl pH 7.0)
dGTP: λmax 252 nm, ε 13.7 L mmol-1 cm-1 (Tris-HCl pH 7.0)
dTTP: λmax 262 nm, ε 9.6 L mmol-1 cm-1 (Tris-HCl pH 7.0)

Description:
dNTP Set contains four separate solutions of ultrapure dATP, dCTP, dGTP and dTTP supplied as clear aqueous solutions (pH 8.5).

dNTP	Cat. No.	cap color
dATP	mi-N1001	red
dCTP	mi-N1002	blue
dGTP	mi-N1003	yellow
dTTP	mi-N1004	green

Quality Control Specifications:
Low Copy Long Range PCR (18 kb, lambda DNA, template dilution series):
PCR fragment with 50 pg of template or less
RT-PCR (749 bp fragment, human GAPDH gene, template dilution series):
PCR fragment with 10 pg of template or less
Contamination with bacterial or human DNA: not detectable
DNases, RNases, Nicking Activity: not detectable
Proteases: not detectable

Selected references:

Sanger *et al.* (1977) DNA sequencing with chain-terminating inhibitors. *Proc. Natl. Acad. Sci. USA* **74**:5463.

Erlich et al. (1988) Primer-directed enzymatic amplification of DNA with a thermostable DNA polymerase. Science **29 (239)**:487.

Holland et al. (1991) Detection of specific polymerase chain reaction product by utilizing the 5'—3' exonuclease activity of Thermus aquaticus DNA polymerase. Proc. Natl. Acad. Sci. USA **88 (16)**:7276.