DATA SHEET

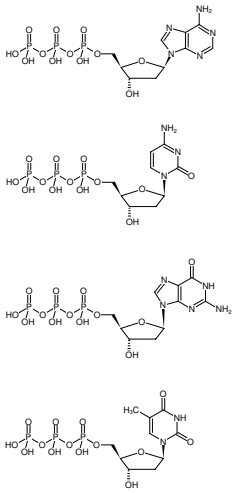
Jena Bioscience

dNTP Bundle

dATP, dCTP, dGTP and dTTP 100 mM solutions

2'-Deoxyadenosine-5'-triphosphate, Sodium salt; 2'-Deoxycytidine-5'-triphosphate, Sodium salt; 2'-Deoxyguanosine-5'-triphosphate, Sodium salt; 2'-Deoxythymidine-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-1005S	4 x 200 µl (4 x 20 µmol)
NU-1005L	4 x 1 ml (4 x 100 µmol)



Structural formula of dNTP Bundle

For general laboratory use.

Shipping: shipped on gel packs

Storage Conditions: store at -20 °C

Shelf Life: 12 months after date of delivery

Molecular Formula:
dATP: $C_{10}H_{16}N_5O_{12}P_3$ (free acid)
dCTP: $C_9H_{16}N_3O_{13}P_3$ (free acid)
dGTP: $C_{10}H_{16}N_5O_{13}P_3$ (free acid)
dTTP: $C_{10}H_{17}N_2O_{14}P_3$ (free acid)

Molecular Weight:
dATP: 491.18 g/mol (free acid)
dCTP: 467.15 g/mol (free acid)
dGTP: 507.18 g/mol (free acid)
dTTP: 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: λ_{max} 259 nm, ε 15.1 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.0)
dCTP: λ_{max} 271 nm, ε 8.9 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.0)
dGTP: λ_{max} 252 nm, ε 14.2 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.0)
dTTP: λ_{max} 267 nm, ε 9.5 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.0)

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Description:
dNTP Bundle 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	NU-1001	red
dCTP	NU-1002	blue
dGTP	NU-1003	yellow
dTTP	NU-1004	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:
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.

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