

dNTP Specifications

	dATP 100 mM Sodium Salt Solution	dCTP 100 mM Sodium Salt Solution	dGTP 100 mM Sodium Salt Solution	dTTP 100 mM Sodium Salt Solution	dUTP 100 mM Sodium Salt Solution
Nomenclature	2'-Deoxyadenosine-5'-triphosphate	2'-Deoxycytidine-5'-triphosphate	2'-Deoxyguanosine-5'-triphosphate	2'-Deoxythymidine-5'-triphosphate	2'-Deoxyuridine-5'-triphosphate
CAS Number	1927-31-7	102783-51-7	93919-41-6	18423-43-3	102814-08-4
Formula (Anion)	C ₁₀ H ₁₃ N ₅ O ₁₂ P ₃	C ₉ H ₁₃ N ₃ O ₁₃ P ₃	C ₁₀ H ₁₃ N ₅ O ₁₃ P ₃	C ₁₀ H ₁₄ N ₂ O ₁₄ P ₃	C ₉ H ₁₂ N ₂ O ₁₄ P ₃
Formula Weight (g x mol⁻¹)	488.16	464.13	504.16	479.14	465.12
Storage	at -20 °C	at -20 °C	at -20 °C	at -20 °C	at -20 °C
Stability	24 months	24 months	24 months	24 months	24 months
Appearance	clear colorless solution	clear colorless solution	clear colorless solution	clear colorless solution	clear colorless solution
Concentration⁽¹⁾ (22 °C, pH 7.0)	100-110 mM (A _{259 nm} , ε = 15.1 l x mmol ⁻¹ x cm ⁻¹)	100-110 mM (A _{271 nm} , ε = 8.9 l x mmol ⁻¹ x cm ⁻¹)	100-110 mM (A _{252 nm} , ε = 14.2 l x mmol ⁻¹ x cm ⁻¹)	100-110 mM (A _{267 nm} , ε = 9.5 l x mmol ⁻¹ x cm ⁻¹)	100-110 mM (A _{262 nm} , ε = 9.8 l x mmol ⁻¹ x cm ⁻¹)
A_{250 nm} / A_{260 nm} (22 °C, pH 7.0)	0.78 ± 0.03	0.82 ± 0.03	1.15 ± 0.04	0.64 ± 0.03	0.74 ± 0.03
A_{280 nm} / A_{260 nm} (22 °C, pH 7.0)	0.15 ± 0.02	0.97 ± 0.03	0.67 ± 0.03	0.74 ± 0.03	0.38 ± 0.02
pH (22 °C)	8.5 ± 0.2	8.5 ± 0.2	8.5 ± 0.2	8.5 ± 0.2	8.5 ± 0.2
dNTP (HPLC area)	≥ 99.0%	≥ 99.0%	≥ 99.0%	≥ 99.0%	≥ 99.0%
dNDP (HPLC area)	≤ 0.5%	≤ 0.5%	≤ 0.5%	≤ 0.5%	≤ 0.5%
rNMP (HPLC area)	≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%
Low Copy Long Range PCR (18 kb, lambda DNA, template dilution series)	PCR fragment with 50 pg of template or less	PCR fragment with 50 pg of template or less	PCR fragment with 50 pg of template or less	PCR fragment with 50 pg of template or less	PCR fragment with 10 pg of template or less ⁽²⁾
RT-PCR (600 bp fragment, human GAPDH gene, template dilution series)	PCR fragment with 10 pg of template or less	PCR fragment with 10 pg of template or less	PCR fragment with 10 pg of template or less	PCR fragment with 10 pg of template or less	-
Contamination with bacterial or human DNA	not detectable	not detectable	not detectable	not detectable	not detectable
DNases, RNases, Nicking Activity	not detectable	not detectable	not detectable	not detectable	not detectable
Proteases	not detectable	not detectable	not detectable	not detectable	not detectable

⁽¹⁾ Extinction coefficients: Cavaluzzi & Borer (2004) *Nucleic Acids Res.* **32** (1):e13

⁽²⁾ Low Copy PCR (1 kb, lambda DNA, template dilution series)