

Certificate of Analysis

Compound Name	2'-Deoxyadenosine 5'-triphosphate (dATP), 100 mM Sodium Salt Solution
CAS Number	1927-31-7
Catalog Number	NU-1001
Lot Number	100.846
Formula	C₁₀H₁₃N₅O₁₂P₃ (Anion)
Formula Weight	488.16 Da
Storage	at -20°C
Stability	24 months from Certification Date

	Test	Specification	Results
Biophysical	Appearance	clear colorless solution	conforms
	Concentration ⁽¹⁾ (A _{259 nm} , 22 °C, pH 7.0, ε = 15.1 l x mmol ⁻¹ x cm ⁻¹)	100-110 mM	102 mM
	A _{250 nm} / A _{260 nm} (22 °C, pH 7.0)	0.78 ± 0.02	0.78
	A _{280 nm} / A _{260 nm} (22 °C, pH 7.0)	0.15 ± 0.01	0.14
	pH (4 °C)	8.5 ± 0.1	8.6
HPLC	dATP (C18-RP-UV, 259 nm)	≥ 99.0% (area)	99.7%
	dADP (C18-RP-UV, 259 nm)	≤ 0.9% (area)	0.3%
	dAMP (C18-RP-UV, 259 nm)	≤ 0.5% (area)	-
Anions & Cations	Chloride Cl ⁻ (Anion chromatography)	≤ 2 mM	0.7 mM
	Acetate CH ₃ COO ⁻ (GC/FID)	≤ 2 mM	< 0.2 mM
	Phosphate PO ₄ ³⁻ (Anion chromatography)	≤ 0.2 mM	< 0.1 mM
	Pyrophosphate P ₂ O ₆ ⁴⁻ (enzymatic)	≤ 0.05 mM	conforms
	Magnesium Mg ²⁺ (ICP-MS)	≤ 0.25 mM	0.02 mM
	Calcium Ca ²⁺ (ICP-MS)	≤ 0.25 mM	0.05 mM
	Total Heavy Metals ⁽²⁾ (ICP-MS)	≤ 5 µg x ml ⁻¹	0.6 µg x ml ⁻¹
Functional	Low Copy Long Range PCR (18 kb, lambda DNA, template dilution series)	PCR fragment with 100 pg of template or less	50 pg
	RT-PCR (600 bp fragment, human GAPDH gene, template dilution series)	PCR fragment with 100 pg of template or less	100 pg
	Contamination with bacterial DNA (qPCR, 16S rRNA ⁽³⁾)	not detectable	conforms
	Contamination with human DNA (qPCR, beta-actin gene ⁽⁴⁾)	not detectable	conforms
	DNases, RNases, Nicking Activity (FRET)	not detectable	conforms
	Proteases (UV-Vis)	not detectable	conforms

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

⁽²⁾ Ba, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, Sn, U

⁽³⁾ Greisen et al. (1994) J. Clin. Microbiol. 32(2):335

⁽⁴⁾ Fields et al. (2001) Toxicol. Sci. 63:107

Certification Date: 2008, Dec. 16



Sebastian Buegener, Quality Control