

## dATP 100mM

Suitable for Research and further Manufacturing Use

Catalog No:	MDX046
Lot No:	NU060-B093610
Storage Conditions:	-20°C
Component Lot No:	DA-021203A
Expiry date:	April 2023

### Quality Control Parameters

2'-deoxyadenosine-5'-triphosphate



MW = 514.916 g /mol

Certified <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates

Characteristics	Specification	Result
Concentration (at $\lambda_{max}$ , pH 7.0, $\epsilon = 15.4 \text{ E} \times \text{mmol}^{-1} \times \text{cm}^{-1}$ )	100 mM $\pm$ 5%	100.9 mM
pH of Solution (at 20°C)	7.5 – 8.0	7.51 @ 23°C
$\lambda_{max}$ (at pH 7.0)	259 $\pm$ 1 nm	259.5 nm
A250/A260	0.78 $\pm$ 0.03	0.79
A280/A260	0.15 $\pm$ 0.02	0.13
Purity dATP (HPLC Area % at $\lambda_{max}$ )	$\geq$ 99%	99.9%
dNDP + dNMP (HPLC Area % at $\lambda_{max}$ )	<1%	Passed
Appearance	Clear colourless solution	Passed

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Analysis	Specification	Result
Functional	A 3Kb Lambda DNA fragment is amplified with a dilution series of dATP, using standard conditions and 30 cycles. Single distinct bands were observed with agarose gel electrophoresis (ethidium stained).	Passed
DNA contamination	Quantitative PCR analysis with no template. Presence of <i>E. coli</i> and mouse genomic DNA checked. Test sample must amplify in line with a reference sample.	Passed
DNase	Incubation of a 1Kb double stranded DNA fragment. Incubation for 4 hours at 37°C with dilution series of DNase I. Analysed by agarose gel electrophoresis. Test sample must show less degradation than the limit of detection $2.5 \times 10^{-3}$ U DNase.	Passed
RNase	Quantitative PCR analysis with high and low RNase standards. Test sample must show less RNase activity than the limit of detection $9.7 \times 10^{-3}$ ng/ $\mu$ L RNase.	Passed
Nicking Activity	Incubation of dATP with supercoiled control plasmid. Analysed by agarose gel electrophoresis. Test sample does not show an increase of linearized or relaxed plasmid.	Passed

QA / QC Representative:



Andrew Galeeba-M

 Date: 4<sup>th</sup> March 2021

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