

## dATP 100mM

Suitable for Research and further Manufacturing Use

Catalog No:	MDX046
Lot No:	NU060-B122540
Storage Conditions:	-20°C
Component Lot No:	DA-223111A
Expiry date:	December 2025

### 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, $\epsilon = 15.4 \text{ E x mmol}^{-1} \text{ x cm}^{-1}$ )	100 mM $\pm$ 5%	101.22 mM
pH of Solution(at 20°C)	7.5 – 8.0	7.56 @ 20.3°C
$\lambda_{max}$ (at pH 7.0)	259 $\pm$ 1 nm	259.5 nm
A250/A260	0.78 $\pm$ 0.03	0.77
A280/A260	0.15 $\pm$ 0.02	0.15
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

**United Kingdom**

Tel: +44 (0)20 8830 5300  
Fax: +44 (0)20 8452 2822

**USA**

Tel: +1 901.382.8716  
Fax: +1 901.382.0027

**Germany**

Tel: +49 (0)3371 60222 00  
Fax: +49 (0)3371 60222 01

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:



Alberta Newton

 Date: 9<sup>th</sup> November 2023

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