	<b>Certificate of Analysis</b>	COA No: CA_XBN-0002
		Version: 10

<b>dUTP 100mM</b>  Suitable for Research and further Manufacturing Use	Catalog No:	BIO-39035
	Lot No:	DS415-B125050
	Storage Conditions:	-20°C
	Component Lot No:	DU-124101B
	Expiry date:	February 2026

### Quality Control Parameters

2'-deoxyuridine-5'-triphosphate

$C_9H_{12}N_2O_{14}P_3Li_4$

MW = 492.884 g /mol

Certified <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates

Characteristics	Specification	Result
Concentration (at $\lambda_{max}$ , pH 7.0, $\epsilon = 10.0 \text{ E} \times \text{mmol}^{-1} \times \text{cm}^{-1}$ )	100 mM $\pm$ 5%	102.2 mM
pH of Solution(at 20 °C)	7.5 – 8.0	7.54@22°C
$\lambda_{max}$ (at pH 7.0)	262 $\pm$ 1 nm	261.5 nm
A250/A260	0.75 $\pm$ 0.03	0.74
A280/A260	0.38 $\pm$ 0.05	0.34
dNTP (HPLC Area % at $\lambda_{max}$ )	$\geq$ 99%	99.83%
dNDP + dAMP (HPLC Area % at $\lambda_{max}$ )	<1%	Passed
Appearance	Clear colourless solution	Passed

#### United Kingdom


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#### USA

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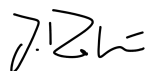
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Analysis	Specification	Result
Functional	A 800bp human genomic DNA fragment is amplified with a dilution series of dUTP, using standard conditions and 30 cycles. Single distinct bands were observed with agarose gel electrophoresis (ethidium stained).	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 contamination	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 contamination	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 dUTP 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:



Jan Rahnenführer

Date: 7<sup>th</sup> February 2024

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