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|---|---|---|
| BIOLINE | **Certificate of Analysis** | **COA No: CA BN-0006** |
| | | **Version: 03** |

| | | |
|---|---|---|
| **dATP 100mM** | Storage Conditions: | -20°C |
| | Lot number: | DA-516102 |
| For Research Use Only | Expiry date: | March 2018 |

## Quality Control Parameters

### 2'-deoxyadenosine-5'-triphosphate

### $C_{10}H_{12}N_5O_{12}P_3Li_4$

### MW = 514.916 g /mol

**Certified <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates**

| Characteristics | Specification | Result |
|---|---|---|
| Concentration (at λmax, pH 7.0, ε = 15.4 E x $mmol^{-1}$ x $cm^{-1}$) | 100 mM ± 5% | 102.9 mM |
| pH of Solution(at 20°C) | 7.5 – 8.0 | 0.751 |
| λmax (at pH 7.0) | 259 ± 1 nm | 259.5 nm |
| A250/A260 | 0.78 ± 0.03 | 0.78 |
| A280/A260 | 0.15 ± 0.02 | 0.14 |
| Purity dATP (HPLC Area % at λmax) | ≥99% | >99.7% |
| dNDP + dNMP (HPLC Area % at λmax) | <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 *E. coli* and mouse genomic DNA checked. Test sample must amplify in line with a reference sample. | Passed |
| DNase / RNase / Nicking Activity | 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 x $10^{-3}$ U DNase.<br><br>Quantitative PCR analysis with high and low RNase standards. Test sample must show less RNase activity than the limit of detection 9.7x$10^{-3}$ ng/µl RNase.<br><br>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<br><br>Passed<br><br>Passed |

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