

New England Biolabs Certificate of Analysis

Product Name: *dATP Solution*
Catalog #: *N0440S*
Concentration: *100 mM*
Unit Definition: *N/A*
Lot #: *0541509*
Assay Date: *09/2015*
Expiration Date: *09/2017*
Storage Temp: *-20°C*
Storage Conditions: *Supplied in Ultrapure water as a sodium salt (pH 7.5)*
Specification Version: *PS-N0440S v1.0*
Effective Date: *16 Oct 2015*

Assay Name/Specification (minimum release criteria)	Lot #0541509
<p>Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 1 µl of dATP Solution incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 10 µl of dATP Solution incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>PCR Amplification (0.5 kb Lambda, dNTPs) - A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM dATP, dGTP, dCTP, and dTTP and 0.5 µM primers containing 1 ng Lambda DNA with 1.25 units of <i>Taq</i> DNA Polymerase for 25 cycles of PCR amplification results in the expected 0.5 kb product.</p>	Pass
<p>PCR Amplification (2.0 kb Lambda, dNTPs) - A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM dATP, dGTP, dCTP, and dTTP and 0.5 µM primers containing 1 ng Lambda DNA with 1.25 units of <i>Taq</i> DNA Polymerase for 25 cycles of PCR amplification results in the expected 2.0 kb product.</p>	Pass
<p>PCR Amplification (5.0 kb Lambda, dNTPs) - A 50 µl reaction in ThermoPol® Reaction Buffer in the presence of 200 µM dATP, dGTP, dCTP, and dTTP and 0.5 µM primers containing 1 ng Lambda DNA with 1.25 units of <i>Taq</i> DNA Polymerase for 25 cycles of PCR amplification results in the expected 5.0 kb product.</p>	Pass
<p>Phosphatase Activity (pNPP) - A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 2.5 mM <i>p</i>-Nitrophenyl Phosphate (pNPP) and a minimum of 4 µl dATP Solution incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	Pass

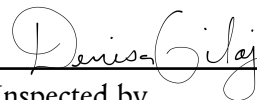


New England Biolabs Certificate of Analysis

Assay Name/Specification (minimum release criteria)	Lot #0541509
Physical Purity (HPLC) - dATP Solution is \geq 99% pure as determined by HPLC analysis.	Pass
RNase Activity (Extended Digestion) - A 10 μ l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 μ l of dATP Solution is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass



Authorized by
Melanie Fortier
16 Oct 2015



Inspected by
Denisa Gilaj
27 Oct 2015

