New England Biolabs
Product Specification

Product Name: *NEBNext® dA-Tailing Reaction Buffer*

Catalog #:   *B6059S*

Concentration: *10X Concentrate*

Shelf Life: *24 months*

Storage Temp: *-20°C*

Composition (1X):   *10 mM Tris-HCl, 10 mM $MgCl_2$, 50 mM NaCl, 1 mM DTT, 0.2 mM dATP, (pH 7.9 @ 25°C)*

Specification Version: *PS-B6059S v2.0*

Effective Date: *12 Feb 2020*

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking, Buffer) - A 50 µl reaction in 1X NEBNext® dA-Tailing Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Non-Specific DNase Activity (16 hour, Buffer) - A 50 µl reaction in 1X NEBNext® dA-Tailing Reaction Buffer containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Phosphatase Activity (pNPP, Buffer) - A 200 µl reaction in 1M Diethanolamine @ pH 9.8 and 0.5 mM $MgCl_2$ containing 2.5 mM *p*-Nitrophenyl Phosphate (pNPP) and a minimum of 20 µl NEBNext® dA-Tailing Reaction Buffer incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.

RNase Activity (Buffer) - A 10 µl reaction in 1X NEBNext® dA-Tailing Reaction Buffer containing 40 ng of a 300 base single-stranded RNA 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.

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Date   12 Feb 2020

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