

## New England Biolabs Product Specification

*Product Name:* NEBNext<sup>®</sup> Library Dilution Buffer  
*Catalog #:* B6118S  
*Concentration:* 10X Concentrate  
*Shelf Life:* 24 months  
*Storage Temp:* -20°C  
*Composition (1X):* Proprietary  
*Specification Version:* PS-B6118S v2.0  
*Effective Date:* 12 Feb 2020

### Assay Name/Specification (minimum release criteria)

**Endonuclease Activity (Nicking, Buffer)** - A 50 µl reaction in 1X NEBNext<sup>®</sup> Library Dilution 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<sup>®</sup> Library Dilution 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<sub>2</sub> containing 2.5 mM *p*-Nitrophenyl Phosphate (pNPP) and a minimum of 20 µl NEBNext<sup>®</sup> Library Dilution 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<sup>®</sup> Library Dilution 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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