

## New England Biolabs Product Specification

*Product Name:* NEBNext<sup>®</sup> dsDNA Fragmentase<sup>®</sup> Reaction Buffer  
*Catalog #:* B0348S  
*Concentration:* 10X Concentrate  
*Shelf Life:* 24 months  
*Storage Temp:* -20°C  
*Composition (1X):* 20 mM Tris-HCl, 50 mM NaCl, 10 mM MgCl<sub>2</sub>, 0.15% Triton<sup>®</sup>X-100, (pH 7.5 @ 25°C)  
*Specification Version:* PS-B0348S v1.0  
*Effective Date:* 10 Aug 2018

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

**Endonuclease Activity (Nicking, Buffer)** - A 50 µl reaction in 1X NEBNext<sup>®</sup> dsDNA Fragmentase<sup>®</sup> 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<sup>®</sup> dsDNA Fragmentase<sup>®</sup> Reaction Buffer containing 1 µg of T3 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> dsDNA Fragmentase<sup>®</sup> Reaction Buffer incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.

**Protease Activity (SDS-PAGE, Buffer)** - A 30 µl reaction in 1X NEBNext<sup>®</sup> dsDNA Fragmentase<sup>®</sup> Reaction Buffer incubated with 24 µg of a standard mixture of proteins for 20 hours at 37°C resulted in no proteolytic activity detected by SDS-PAGE.



Date 10 Aug 2018

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Director of Quality Control

