

## New England Biolabs Product Specification

<i>Product Name:</i>	NEBNext <sup>®</sup> dsDNA Fragmentase <sup>®</sup> Reaction Buffer v2
<i>Catalog #:</i>	B0349S
<i>Concentration:</i>	10X Concentrate
<i>Shelf Life:</i>	24 months
<i>Storage Temp:</i>	-20°C
<i>Composition (1X):</i>	20 mM Tris-HCl, 15 mM MgCl <sub>2</sub> , 50 mM NaCl, 0.15% Triton <sup>®</sup> X-100, 0.1 mg/ml BSA, (pH 7.5 @ 25°C)
<i>Specification Version:</i>	PS-B0349S v2.0
<i>Effective Date:</i>	12 Feb 2020

### 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 v2 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 v2 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> dsDNA Fragmentase<sup>®</sup> Reaction Buffer v2 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 v2 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.

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Date 12 Feb 2020

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