

## New England Biolabs Product Specification

<i>Product Name:</i>	<i>Taq DNA Ligase Reaction Buffer</i>
<i>Catalog #:</i>	<i>B0208S</i>
<i>Concentration:</i>	<i>10X Concentrate</i>
<i>Shelf Life:</i>	<i>36 months</i>
<i>Storage Temp:</i>	<i>-20°C</i>
<i>Composition (1X):</i>	<i>20 mM Tris-HCl, 25 mM Potassium Acetate, 10 mM Magnesium Acetate, 1 mM NAD<sup>+</sup>, 10 mM DTT, 0.1% Triton X-100, (pH 7.3 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-B0208S v2.0</i>
<i>Effective Date:</i>	<i>27 Sep 2022</i>

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

**Endonuclease Activity (Nicking, Buffer)** - A 50 µl reaction in 1X *Taq* DNA Ligase 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.

**Functional Testing (DNA Ligase Buffer)** - A 50 µl reaction in 1X *Taq* DNA Ligase Reaction Buffer containing 1 µg of BstEII digested Lambda DNA and 1 unit of *Taq* DNA Ligase incubated for 15 minutes at 45°C results in approximately 50% ligation of the cohesive ends of the DNA fragments as determined by agarose gel electrophoresis.

**Non-Specific DNase Activity (16 hour, Buffer)** - A 50 µl reaction in 1X *Taq* DNA Ligase Reaction Buffer containing 1 µg of HaeIII digested PhiX174 RF I DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

**RNase Activity (Buffer)** - A 10 µl reaction in 1X *Taq* DNA Ligase Reaction Buffer containing 40 ng of a 300 base single-stranded RNA is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by polyacrylamide gel electrophoresis.

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Lauren Brown  
Quality Approver

