

New England Biolabs Product Specification

<i>Product Name:</i>	<i>NlaIII</i>
<i>Catalog #:</i>	<i>R0125S/L/V</i>
<i>Concentration:</i>	<i>10,000 units/ml</i>
<i>Unit Definition:</i>	<i>One unit is defined as the amount of enzyme required to digest 1 µg of PhiX174 RF I DNA in 1 hour at 37°C in a total reaction volume of 50 µl.</i>
<i>Shelf Life:</i>	<i>24 months</i>
<i>Storage Temp:</i>	<i>-80°C</i>
<i>Storage Conditions:</i>	<i>300 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 500 µg/ml BSA, (pH 7.4 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-R0125S/L v3.0</i>
<i>Effective Date:</i>	<i>16 Oct 2017</i>

Assay Name/Specification (minimum release criteria)

Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] *E. coli* DNA and a minimum of 100 units of NlaIII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of PhiX174 DNA with NlaIII, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 25°C. Of these ligated fragments, >95% can be recut with NlaIII.

Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of PhiX174 DNA and a minimum of 50 Units of NlaIII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Protein Purity Assay (SDS-PAGE) - NlaIII is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.

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Date 16 Oct 2017

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Quality Approver

