

## New England Biolabs Product Specification

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|-------------------------------|---|
| <b>Product Name:</b>          | <i>NlaIII</i>   |
| <b>Catalog #:</b>             | <i>R0125S/L</i>   |
| <b>Concentration:</b>         | <i>10,000 units/ml</i>  |
| <b>Unit Definition:</b>       | <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> |
| <b>Shelf Life:</b>            | <i>24 months</i>  |
| <b>Storage Temp:</b>          | <i>-80°C</i>  |
| <b>Storage Conditions:</b>    | <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>  |
| <b>Specification Version:</b> | <i>PS-R0125S/L v3.0</i>   |
| <b>Effective Date:</b>        | <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 [<sup>3</sup>H] *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.

\* The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.



Date 16 Oct 2017

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