

## New England Biolabs Certificate of Analysis


**Product Name:** NlaIII  
**Catalog Number:** R0125S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** 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.  
**Packaging Lot Number:** 10055794  
**Expiration Date:** 10/2021  
**Storage Temperature:** -80°C  
**Storage Conditions:** 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)  
**Specification Version:** PS-R0125S/L v3.0

NlaIII Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0125SVIAL	NlaIII	10055792	Pass
B7204SVIAL	CutSmart® Buffer	10055735	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10046084	Pass

Assay Name/Specification	Lot # 10055794
<b>Exonuclease Activity (Radioactivity Release)</b> 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.	<b>Pass</b>
<b>Ligation and Recutting (Terminal Integrity)</b> 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.	<b>Pass</b>
<b>Non-Specific DNase Activity (16 Hour)</b> 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.	<b>Pass</b>
<b>Protein Purity Assay (SDS-PAGE)</b> NlaIII is >95% pure as determined by SDS PAGE analysis using Coomassie Blue	<b>Pass</b>

Assay Name/Specification	Lot # 10055794
detection.	

This product has been tested and shown to be in compliance with all specifications.

  
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Doreen Duquette  
Production Scientist  
20 Aug 2019

  
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Jay Minichiello  
Packaging Quality Control Inspector  
25 Oct 2019