

## New England Biolabs Certificate of Analysis


**Product Name:** Nsil  
**Catalog Number:** R0127L  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in 50 µl of reaction buffer.  
**Packaging Lot Number:** 10063019  
**Expiration Date:** 08/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA  
**Specification Version:** PS-R0127S/L v1.0

Nsil Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0127LVIAL	Nsil	10052703	Pass
B7203SVIAL	NEBuffer™ 3.1	10053973	Pass

Assay Name/Specification	Lot # 10063019
<b>Protein Purity Assay (SDS-PAGE)</b> Nsil is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 50 Units of Nsil incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 3.1 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 Nsil incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 30 units of Nsil incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b>	Pass

Assay Name/Specification	Lot # 10063019
After a 20-fold over-digestion of Lambda DNA with Nsil, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with Nsil.	

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



Anthony Francis  
Production Scientist  
27 Aug 2019



Jay Minichiello  
Packaging Quality Control Inspector  
02 Jan 2020