

New England Biolabs Certificate of Analysis

Product Name: Nsil-HF[®]
Catalog Number: R3127S
Concentration: 20,000 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 a total reaction volume of 50 µl.
Packaging Lot Number: 10068485
Expiration Date: 11/2021
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-R3127S/L v1.0

Nsil-HF [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3127SVIAL	Nsil-HF [®]	10059958	Pass
B7204SVIAL	CutSmart [®] Buffer	10069112	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10065746	Pass

Assay Name/Specification	Lot # 10068485
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of supercoiled ϕX174 DNA and a minimum of 100 units of Nsil-HF incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 100 units of Nsil-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Functional Test (15 minute Digest) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of Lambda DNA and 1 µl of Nsil-HF incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with Nsil-HF, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments,	Pass

Assay Name/Specification	Lot # 10068485
>95% can be recut with Nsil-HF.	
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 100 units of Nsil-HF incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) Nsil-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass

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



Penghua Zhang
Production Scientist
08 Apr 2020



Jay Minichiello
Packaging Quality Control Inspector
08 Apr 2020