

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: 10150210
Expiration Date: 05/2024
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 [®]	10150208	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10153339	Pass
B6004SVIAL	rCutSmart [™] Buffer	10151374	Pass

Assay Name/Specification	Lot # 10150210
Protein Purity Assay (SDS-PAGE) Nsil-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	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, >95% can be recut with Nsil-HF.	Pass
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.	Pass

Assay Name/Specification	Lot # 10150210
<p>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 Nsil-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>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.</p>	Pass

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

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Penghua Zhang
Production Scientist
29 Jun 2022



Josh Hersey
Packaging Quality Control Inspector
29 Jun 2022