

New England Biolabs Certificate of Analysis

Product Name: BsiWI-HF[®]
Catalog Number: R3553L
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of PhiX174 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10080181
Expiration Date: 08/2022
Storage Temperature: -20°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-R3553S/L v1.0

BsiWI-HF [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3553LVIAL	BsiWI-HF [®]	10080179	Pass
B7204SVIAL	CutSmart [®] Buffer	10078756	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10082183	Pass

Assay Name/Specification	Lot # 10080181
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart [®] Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 20 units of BsiWI-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 BsiWI-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Functional Testing (15 minute Digest) A 50 µl reaction in CutSmart [®] Buffer containing 1 µg of PhiX174 DNA and 1 µl of BsiWI-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 PhiX174 DNA with BsiWI-HF, >95% of the DNA	Pass

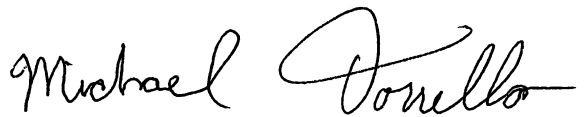
Assay Name/Specification	Lot # 10080181
fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with BsiWI-HF.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of PhiX174 DNA and a minimum of 100 units of BsiWI-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
Protein Purity Assay (SDS-PAGE) BsiWI-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



Penghua Zhang
Production Scientist
11 Sep 2020



Michael Tonello
Packaging Quality Control Inspector
11 Sep 2020