

New England Biolabs Certificate of Analysis

Product Name: BsiWI
Catalog Number: R0553L
Concentration: 10,000 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 55°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10106288
Expiration Date: 04/2023
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-R0553S/L v1.0

BsiWI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0553LVIAL	BsiWI	10106287	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10093123	Pass
B6003SVIAL	NEBuffer™ r3.1	10103929	Pass

Assay Name/Specification	Lot # 10106288
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of PhiX174 DNA and a minimum of 10 Units of BsiWI incubated for 16 hours at 55°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 20 units of BsiWI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled pUC19 DNA and a minimum of 10 Units of BsiWI incubated for 4 hours at 55°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of PhiX174 DNA with BsiWI, >95% of the DNA fragments	Pass

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can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with BsiWI.	

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

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Penghua Zhang
Production Scientist
14 Jun 2021



Josh Hersey
Packaging Quality Control Inspector
14 Jun 2021