

## New England Biolabs Certificate of Analysis

**Product Name:** BsiWI  
**Catalog Number:** R0553S  
**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:** 10127894  
**Expiration Date:** 11/2023  
**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
R0553SVIAL	BsiWI	10127893	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10121393	Pass
B6003SVIAL	NEBuffer™ r3.1	10116057	Pass

Assay Name/Specification	Lot # 10127894
<b>Endonuclease Activity (Nicking)</b> 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
<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 20 units of BsiWI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of PhiX174 DNA with BsiWI, >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 BsiWI.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of PhiX174 DNA and a minimum of 10	Pass

Assay Name/Specification	Lot # 10127894
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.	

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

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03 Dec 2021



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