

## 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:** 10091745  
**Expiration Date:** 07/2022  
**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	10078704	Pass
B7203SVIAL	NEBuffer™ 3.1	10085493	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10084972	Pass

Assay Name/Specification	Lot # 10091745
<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 # 10091745
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.

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



---

Penghua Zhang  
Production Scientist  
24 Nov 2020



---

Josh Hersey  
Packaging Quality Control Inspector  
24 Nov 2020