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New England Biolabs
Certificate of Analysis

Product Name:	*BsiWI*
Catalog #:	*R0553S/L*
Concentration:	*10,000 units/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 volumn of 50 µl.*
Lot #:	*0341503*
Assay Date:	*03/2015*
Expiration Date:	*3/2017*
Storage Temp:	*-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*
Effective Date:	*28 Oct 2014*

Assay Name/Specification (minimum release criteria)	**Lot #0341503**
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**
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**
Ligation and Recutting (Terminal Integrity) - 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**
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**

Authorized by
Derek Robinson
28 Oct 2014

Inspected by
Robert Maunus
25 Mar 2015

ISO 9001 Registered Quality Management
ISO 14001 Registered Environmental Management
ISO 13485 Registered Medical Devices