

New England Biolabs Certificate of Analysis

Product Name: *BspEI*
Catalog Number: *R0540S*
Concentration: *10,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (dam) in 1 hour at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number: *10079957*
Expiration Date: *03/2022*
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-R0540S/L v1.0*

BspEI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0540SVIAL	BspEI	10068594	Pass
B7203SVIAL	NEBuffer™ 3.1	10077593	Pass

Assay Name/Specification	Lot # 10079957
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda dam- DNA and a minimum of 50 units of BspEI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda dam- DNA with BspEI, >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 BspEI.</p>	Pass
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of BspEI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Blue-White Screening (Terminal Integrity) A sample of LITMUS38i vector linearized with a 10-fold excess of BspEI, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene</p>	Pass

Assay Name/Specification	Lot # 10079957
<p>results in <1% white colonies.</p> <p>Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 Units of BspEI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<p>Pass</p>

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
27 Aug 2020



Josh Hersey
Packaging Quality Control Inspector
27 Aug 2020