

New England Biolabs Certificate of Analysis

Product Name: BspEI
Catalog Number: R0540L
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: 10070951
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 |
| R0540LVIAL | BspEI | 10068596 | Pass |
| B7203SVIAL | NEBuffer™ 3.1 | 10053975 | Pass |

| Assay Name/Specification | Lot # 10070951 |
|---|----------------|
| <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>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>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>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%</p> | Pass |

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|--|--------------------|
| <p>conversion to the nicked form as determined by agarose gel electrophoresis.</p> <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 results in <1% white colonies.</p> | <p>Pass</p> |

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



Penghua Zhang
Production Scientist
20 Apr 2020



Jay Minichiello
Packaging Quality Control Inspector
20 Apr 2020