

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: 10169066
Expiration Date: 11/2024
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 300 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA (pH 7.4 @ 25°C)
Specification Version: PS-R0540S/L v2.0

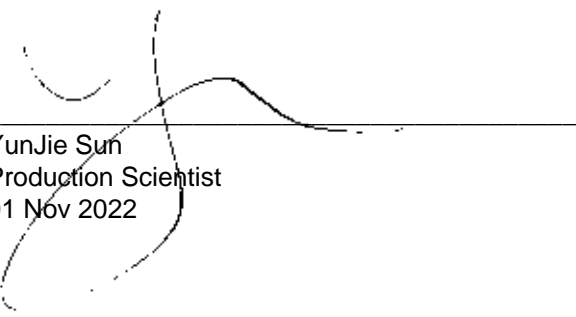
BspEI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0540SVIAL	BspEI	10169064	Pass
B6003SVIAL	NEBuffer™ r3.1	10146826	Pass

Assay Name/Specification	Lot # 10169066
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer™ r3.1 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.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer™ r3.1 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.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of a mixture of single and double-stranded [³ H] 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.	Pass
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	Pass


Assay Name/Specification	Lot # 10169066
<p>results in <1% white colonies.</p> <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>	<p>Pass</p>

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

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Production Scientist
01 Nov 2022



Michael Tonello
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04 Nov 2022