

## New England Biolabs Certificate of Analysis

**Product Name:** BstUI  
**Catalog Number:** R0518L  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 60°C in 50 µl assay buffer.  
**Packaging Lot Number:** 10054613  
**Expiration Date:** 07/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA  
**Specification Version:** PS-R0518S/L v1.0

| BstUI Component List |                       |            |                      |
|----------------------|-----------------------|------------|----------------------|
| NEB Part Number      | Component Description | Lot Number | Individual QC Result |
| R0518LVIAL           | BstUI                 | 10050202   | Pass                 |
| B7204SVIAL           | CutSmart® Buffer      | 10053982   | Pass                 |

| Assay Name/Specification  | Lot # 10054613 |
|---|----------------|
| <p><b>Exonuclease Activity (Radioactivity Release)</b><br/>           A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 100 units of BstUI incubated for 4 hours at 60°C releases &lt;0.1% of the total radioactivity.</p>   | Pass           |
| <p><b>Ligation and Recutting (Terminal Integrity)</b><br/>           After a 20-fold over-digestion of Lambda DNA with BstUI, ~50% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with BstUI.</p>   | Pass           |
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>           A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and a minimum of 100 Units of BstUI incubated for 16 hours at 60°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass           |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>           BstUI is &gt;95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>   | Pass           |

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

*Stephanie Cornelio*

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Stephanie Cornelio  
Production Scientist  
22 Jul 2019

*Michael Tonello*

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Michael Tonello  
Packaging Quality Control Inspector  
31 Oct 2019