

## New England Biolabs Certificate of Analysis

**Product Name:** BseYI  
**Catalog Number:** R0635L  
**Concentration:** 5,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in NEBuffer r3.1 in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10251531  
**Expiration Date:** 07/2026  
**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 rAlbumin (pH 7.4 @ 25°C)  
**Specification Version:** PS-R0635S/L v2.0

| BseYI Component List |                              |            |                      |
|----------------------|------------------------------|------------|----------------------|
| NEB Part Number      | Component Description        | Lot Number | Individual QC Result |
| R0635LVIAL           | BseYI                        | 10247948   | Pass                 |
| B7024AVIAL           | Gel Loading Dye, Purple (6X) | 10236424   | Pass                 |
| B6003SVIAL           | NEBuffer™ r3.1               | 10237086   | Pass                 |

| Assay Name/Specification  | Lot # 10251531 |
|---|----------------|
| <b>Exonuclease Activity (Radioactivity Release)</b><br>A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 25 units of BseYI incubated for 4 hours at 37°C releases <0.2% of the total radioactivity.    | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 5-fold over-digestion of Lambda DNA with BseYI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~75% can be recut with BseYI.  | Pass           |
| <b>Non-Specific DNase Activity (16 Hour)</b><br>A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of Lambda DNA and a minimum of 15 units of BseYI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass           |
| <b>Protein Purity Assay (SDS-PAGE)</b><br>BseYI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue   | Pass           |

| Assay Name/Specification   | Lot # 10251531     |
|--|--------------------|
| <p>detection.</p> <p><b>qPCR DNA Contamination (E. coli Genomic)</b><br/>           A minimum of 5 units of BseYI is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is <math>\leq 1</math> E. coli genome.</p> | <p><b>Pass</b></p> |

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

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17 Jul 2024



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