

*be* INSPIRED *drive* DISCOVERY *stay* GENUINE

240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com

## New England Biolabs Certificate of Analysis

| Product Name:          | Bgll   |
|------------------------|--|
| Catalog Number:        | R0143S   |
| Concentration:         | 10,000 U/ml  |
| Unit Definition:       | One unit is defined as the amount of enzyme required to digest 1 $\mu$ g of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 $\mu$ l. |
| Packaging Lot Number:  | 10206891   |
| Expiration Date:       | 09/2025  |
| Storage Temperature:   | -20°C  |
| Storage Conditions:    | 200 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50%<br>Glycerol, 200 μg/ml BSA  |
| Specification Version: | PS-R0143S/L v1.0   |

| BgII Component List |                       |            |                      |  |
|---------------------|-----------------------|------------|----------------------|--|
| NEB Part Number     | Component Description | Lot Number | Individual QC Result |  |
| R0143SVIAL          | Bgll                  | 10206323   | Pass                 |  |
| B6003SVIAL          | NEBuffer™ r3.1        | 10182165   | Pass                 |  |

| Assay Name/Specification   | Lot # 10206891 |
|--|----------------|
| <b>Endonuclease Activity (Nicking)</b><br>A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled PhiX174 DNA and a<br>minimum of 10 units of BgII incubated for 4 hours at 37°C results in <20% conversion<br>to the nicked form as determined by agarose gel electrophoresis.              | Pass           |
| <b>Exonuclease Activity (Radioactivity Release)</b><br>A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and<br>double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 100 units of Bgll incubated for 4<br>hours at 37°C releases <0.1% of the total radioactivity.   | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 50-fold over-digestion of Lambda DNA with BgII, >95% of the DNA fragments<br>can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments,<br>>95% can be recut with BgII.  | Pass           |
| <b>Non-Specific DNase Activity (16 Hour)</b><br>A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 50<br>units of BgII incubated for 16 hours at 37°C results in a DNA pattern free of<br>detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass           |





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

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YunJie Sun Production Scientist 06 Sep 2023

Nichae 11.

Michael Tonello Packaging Quality Control Inspector 07 Nov 2023

