

New England Biolabs Certificate of Analysis

Product Name: BgIII
Catalog Number: R0144S
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 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10138025
Expiration Date: 08/2023
Storage Temperature: -20°C
Storage Conditions: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA
Specification Version: PS-R0144S/L v2.0

BgIII Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0144SVIAL	BgIII	10117630	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10131976	Pass
B6003SVIAL	NEBuffer™ r3.1	10132773	Pass

Assay Name/Specification	Lot # 10138025
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 BgIII incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Protein Purity Assay (SDS-PAGE) BgIII is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 100 Units of BgIII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with BgIII, >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 BgIII.	Pass

Assay Name/Specification	Lot # 10138025
<p>Blue-White Screening (Terminal Integrity) A sample of LITMUS28i vector linearized with a 10-fold excess of BglII, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.</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 BglII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



Penghua Zhang
Production Scientist
09 Feb 2022



Michael Tonello
Packaging Quality Control Inspector
09 Feb 2022