

New England Biolabs Certificate of Analysis

Product Name: BgIII
Catalog Number: R0144M
Concentration: 50,000 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.
Lot Number: 10041033
Expiration Date: 03/2021
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-R0144M v2.0

BgIII Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0144MVIAL	BgIII	10041034	Pass
B7203SVIAL	NEBuffer™ 3.1	10033149	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10038710	Pass

Assay Name/Specification	Lot # 10041033
Blue-White Screening (Terminal Integrity) A sample of LITMUS28i vector linearized with a 10-fold excess of BgIII, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass
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
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 100 units of BgIII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	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,	Pass

Assay Name/Specification	Lot # 10041033
>95% can be recut with BgIII.	
<p>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.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) BgIII is >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.



Tony Spear-Alfonso
Production Scientist
23 Jan 2019



Michael Tonello
Packaging Quality Control Inspector
24 Apr 2019