

New England Biolabs Certificate of Analysis

Product Name: *BsgI*
Catalog Number: *R0559S*
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 rCutSmart Buffer in 1 hour at 37°C in a total volume of 50 µl.*
Packaging Lot Number: *10230740*
Expiration Date: *02/2026*
Storage Temperature: *-20°C*
Storage Conditions: *300 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 0.32 mM S-adenosylmethionine (SAM), 50% Glycerol, 500 µg/ml rAlbumin (pH 7.4 @ 25°C)*
Specification Version: *PS-R0559S/L v3.0*

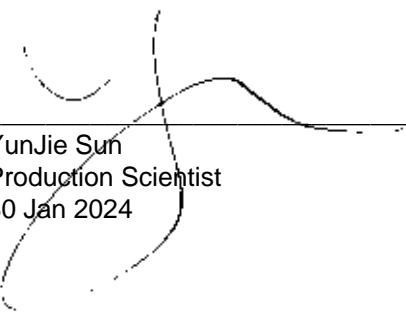
BsgI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0559SVIAL	BsgI	10229127	Pass
B6004SVIAL	rCutSmart™ Buffer	10225675	Pass

Assay Name/Specification	Lot # 10230740
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 50 units of BsgI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Functional Testing (15 minute Digest) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of BsgI incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 5-fold over-digestion of Lambda DNA with BsgI, >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 BsgI.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of	Pass


Assay Name/Specification	Lot # 10230740
<p>15 units of BsgI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p>Protein Purity Assay (SDS-PAGE) BsgI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<p>Pass</p>

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

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YunJie Sun
Production Scientist
30 Jan 2024



Michael Tonello
Packaging Quality Control Inspector
22 Feb 2024