

New England Biolabs Certificate of Analysis

Product Name: BsrDI
Catalog Number: R0574S
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 r2.1 in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10180352
Expiration Date: 02/2025
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)
Specification Version: PS-R0574S/L v2.0

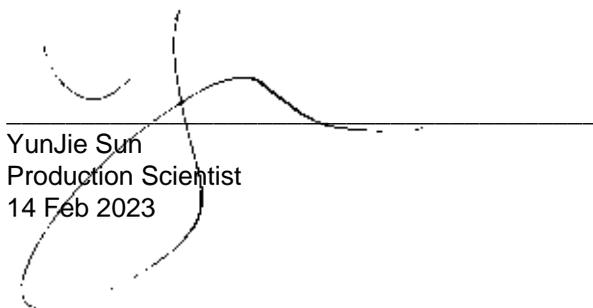
BsrDI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0574SVIAL	BsrDI	10180350	Pass
B6002SVIAL	NEBuffer™ r2.1	10154052	Pass

Assay Name/Specification	Lot # 10180352
<p>Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with BsrDI, >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 BsrDI.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 5 units of BsrDI 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 ≤ 1 E. coli genome.</p>	Pass
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of Lambda DNA and a minimum of 5 units of BsrDI 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>Functional Testing (15 minute Digest) A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of Lambda DNA and 1 µl of BsrDI</p>	Pass

Assay Name/Specification	Lot # 10180352
<p>incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</p> <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 50 units of BsrDI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</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
14 Feb 2023



Josh Hersey
Packaging Quality Control Inspector
27 Feb 2023