

New England Biolabs Certificate of Analysis

Product Name: BsmBI
Catalog Number: R0580S
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 55°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10059950
Expiration Date: 11/2021
Storage Temperature: -20°C
Storage Conditions: 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA
Specification Version: PS-R0580S/L v1.0

BsmBI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0580SVIAL	BsmBI	10059949	Pass
B7203SVIAL	NEBuffer™ 3.1	10053973	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10053980	Pass

Assay Name/Specification	Lot # 10059950
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 10 Units of BsmBI incubated for 16 hours at 55°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 10-fold over-digestion of Lambda DNA with BsmBI, >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 BsmBI.	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 50 units of BsmBI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.	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 BsmBI incubated for 4 hours at 55°C results in <20%	Pass

Assay Name/Specification	Lot # 10059950
conversion to the nicked form as determined by agarose gel electrophoresis.	

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



Jianying Luo
Production Scientist
25 Nov 2019



Jay Minichiello
Packaging Quality Control Inspector
11 Dec 2019