

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.
Lot Number: 10019270
Expiration Date: 06/2020
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	10011887	Pass
B7203SVIAL	NEBuffer™ 3.1	10010189	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10013725	Pass

Assay Name/Specification	Lot # 10019270
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% 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 50 units of BsmBI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.	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
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	Pass

Assay Name/Specification	Lot # 10019270
detectable nuclease degradation as determined by agarose gel electrophoresis.	

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



Tony Spear-Alfonso
Production Scientist
06 Jun 2018



Michael Tonello
Packaging Quality Control Inspector
14 Aug 2018