

New England Biolabs Certificate of Analysis

Product Name: BsmAI
Catalog Number: R0529S
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 1 hour at 55°C in a total reaction volume of 50 µl.
Lot Number: 10042661
Expiration Date: 04/2021
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-R0529S/L v1.0

BsmAI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0529SVIAL	BsmAI	10042662	Pass
B7204SVIAL	CutSmart® Buffer	10042783	Pass

Assay Name/Specification	Lot # 10042661
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with BsmAI, >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 BsmAI.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 15 units of BsmAI incubated for 16 hours at 55°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Protein Purity Assay (SDS-PAGE) BsmAI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 50 units of BsmAI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.	Pass

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



Anthony Francis
Production Scientist
17 Apr 2019



Michael Tonello
Packaging Quality Control Inspector
09 May 2019