

New England Biolabs Certificate of Analysis

Product Name: BsmFI
Catalog Number: R0572L
Concentration: 2,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of pBR322 DNA in rCutSmart Buffer in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10223612
Expiration Date: 12/2025
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 50 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)
Specification Version: PS-R0572S/L v2.0

BsmFI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0572LVIAL	BsmFI	10223611	Pass
B6004SVIAL	rCutSmart™ Buffer	10219598	Pass

Assay Name/Specification	Lot # 10223612
Endonuclease Activity (Nicking) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 10 units of BsmFI incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
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 20 units of BsmFI 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 pBR322 DNA and 1 µl of BsmFI 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 pBR322 DNA with BsmFI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments,	Pass

