

New England Biolabs Certificate of Analysis

Product Name: BsmFI
Catalog Number: R0572S
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 1 hour at 65°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10147890
Expiration Date: 04/2024
Storage Temperature: -20°C
Storage Conditions: 50 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA
Specification Version: PS-R0572S/L v1.0

BsmFI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0572SVIAL	BsmFI	10147889	Pass
B6004SVIAL	rCutSmart™ Buffer	10146828	Pass

Assay Name/Specification	Lot # 10147890
<p>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, >95% can be recut with BsmFI.</p>	Pass
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pBR322 DNA and a minimum of 2 Units of BsmFI incubated for 16 hours at 65°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 20 units of BsmFI incubated for 4 hours at 65°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 10 Units of BsmFI incubated for 4 hours at 65°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass

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

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Production Scientist
02 May 2022



Erin Varney
Packaging Quality Control Inspector
02 May 2022