

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 1 hour at 65°C in a total reaction volume of 50 µl.
Lot Number: 10053625
Expiration Date: 08/2021
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
R0572LVIAL	BsmFI	10053626	Pass
B7204SVIAL	CutSmart® Buffer	10046087	Pass

Assay Name/Specification	Lot # 10053625
<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>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
<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>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

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



Doreen Duquette
Production Scientist
09 Aug 2019



Jay Minichiello
Packaging Quality Control Inspector
27 Aug 2019