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New England Biolabs Certificate of Analysis

Product Name: BsmFl
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	BsmFl	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	Pass
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.	
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 20 units of BsmFl 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 BsmFl incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity)	Pass
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,	



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

The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

YunJie Sun

21 Dec 2023

Production Scientist

Michael Tonello

Packaging Quality Control Inspector

17 Jan 2024



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