NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
Fax 978-921-1350
www.neb.com
info@neb.com

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.*
Lot Number:	*10030470*
Expiration Date:	*09/2020*
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	10010534	**Pass**
B7204SVIAL	CutSmart® Buffer	10021122	**Pass**

Assay Name/Specification	**Lot # 10030470**
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 65ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**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 20 units of BsmFI incubated for 4 hours at 65ºC releases <0.1% of the total radioactivity.	**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 16ºC. Of these ligated fragments, >95% can be recut with BsmFI.	**Pass**
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 65ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

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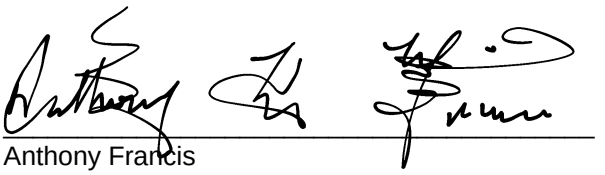
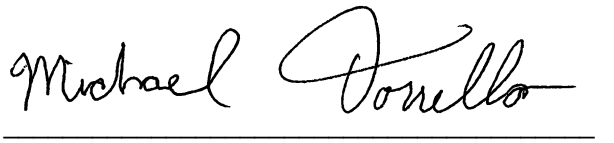
This product has been tested and shown to be in compliance with all specifications.



Anthony Francis
Production Scientist
18 Sep 2018



Michael Tonello
Packaging Quality Control Inspector
29 Nov 2018