

## New England Biolabs Certificate of Analysis

**Product Name:** BstEII-HF<sup>®</sup>  
**Catalog Number:** R3162L  
**Concentration:** 20,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Lot Number:** 10053570  
**Expiration Date:** 08/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA  
**Specification Version:** PS-R3162S/L v1.0

BstEII-HF <sup>®</sup> Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3162LVIAL	BstEII-HF <sup>®</sup>	10053568	Pass
B7204SVIAL	CutSmart <sup>®</sup> Buffer	10046087	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10043910	Pass

Assay Name/Specification	Lot # 10053570
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in CutSmart <sup>™</sup> Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 60 units of BstEII-HF <sup>™</sup> incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in CutSmart <sup>™</sup> Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 60 units of BstEII-HF <sup>™</sup> incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of Lambda DNA with BstEII-HF <sup>™</sup> , >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 BstEII-HF <sup>™</sup> .	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in CutSmart <sup>™</sup> Buffer containing 1 µg of Lambda DNA and a minimum of 60 units of BstEII-HF <sup>™</sup> incubated for 16 hours at 37°C results in a DNA pattern free	Pass

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of detectable nuclease degradation as determined by agarose gel electrophoresis.	

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



Jianying Luo  
Production Scientist  
20 Aug 2019



Jay Minichiello  
Packaging Quality Control Inspector  
22 Aug 2019