

## New England Biolabs Certificate of Analysis

**Product Name:** BsaBI  
**Catalog Number:** R0537L  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (dam-) in 1 hour at 60°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10059628  
**Expiration Date:** 11/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA  
**Specification Version:** PS-R0537S/L v1.0

BsaBI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0537LVIAL	BsaBI	10058787	Pass
B7204SVIAL	CutSmart® Buffer	10061299	Pass

Assay Name/Specification	Lot # 10059628
<p><b>Non-Specific DNase Activity (16 hour)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda dam- DNA and a minimum of 10 units of BsaBI incubated for 16 hours at 60°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE: although no nuclease degradation is detected under these conditions, extended incubations and/or high concentrations of this enzyme may result in star activity. See the product FAQ for recommended reaction conditions for this enzyme.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 10-fold over-digestion of Lambda dam- DNA with BsaBI, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with BsaBI.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 100 units of BsaBI incubated for 4 hours at 60°C releases &lt;0.1% of the total radioactivity.</p>	Pass

Assay Name/Specification	Lot # 10059628
<p><b>Protein Purity Assay (SDS-PAGE)</b> BsaBI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<p><b>Pass</b></p>

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



Jianying Luo  
Production Scientist  
04 Nov 2019



Jay Minichiello  
Packaging Quality Control Inspector  
22 Jan 2020