

## New England Biolabs Certificate of Analysis

**Product Name:** BbsI  
**Catalog Number:** R0539S  
**Concentration:** 10,000 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.  
**Packaging Lot Number:** 10066880  
**Expiration Date:** 01/2021  
**Storage Temperature:** -80°C  
**Storage Conditions:** 300 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 300 µg/ml BSA  
**Specification Version:** PS-R0539S/L v2.0

BbsI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0539SVIAL	BbsI	10063249	Pass
B7202SVIAL	NEBuffer™ 2.1	10043907	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10059229	Pass

Assay Name/Specification	Lot # 10066880
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in NEBuffer 2.1 containing 1 µg of supercoiled pUC19 DNA and a minimum of 10 units of BbsI incubated for 4 hours at 37°C results in &lt;20% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 50 units of BbsI incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	<b>Pass</b>
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 20-fold over-digestion of Lambda DNA with BbsI, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 4 hours at 25°C. Of these ligated fragments, &gt;95% can be recut with BbsI.</p>	<b>Pass</b>
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 ul reaction in NEBuffer 2.1 containing 1 ug of Lambda DNA and a minimum of 50 units of BbsI incubated for 16 hours at 37°C results in a DNA pattern free of</p>	<b>Pass</b>

Assay Name/Specification	Lot # 10066880
detectable nuclease degradation as determined by agarose gel electrophoresis.	

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



Stephanie Cornelio  
Production Scientist  
07 Jan 2020



Michael Tonello  
Packaging Quality Control Inspector  
03 Feb 2020