

## New England Biolabs Certificate of Analysis

**Product Name:** BstYI  
**Catalog Number:** R0523L  
**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 60°C in a total reaction volume of 50 µl.  
**Lot Number:** 10021741  
**Expiration Date:** 09/2020  
**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-R0523S/L v1.0

BstYI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0523LVIAL	BstYI	10020962	Pass
B7202SVIAL	NEBuffer™ 2.1	0261805	Pass

Assay Name/Specification	Lot # 10021741
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in NEBuffer 2.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 Units of BstYI incubated for 4 hours at 60°C results in <50% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<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 BstYI incubated for 4 hours at 60°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 20-fold over-digestion of Lambda DNA with BstYI, >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 BstYI.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 2.1 containing 1 µg of Lambda DNA and a minimum of 30 Units of BstYI incubated for 16 hours at 60°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

Assay Name/Specification	Lot # 10021741
<b>Protein Purity Assay (SDS-PAGE)</b> BstY1 is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	<b>Pass</b>

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



Stephanie Cornelio  
Production Scientist  
18 Sep 2018



Michael Tonello  
Packaging Quality Control Inspector  
09 Oct 2018