

## New England Biolabs Certificate of Analysis

**Product Name:** *Bts(alpha)I*  
**Catalog Number:** R0667L  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of LambdaDNA in 1 hour at 55°C in a total reaction volume of 50 µl.  
**Lot Number:** 10031396  
**Expiration Date:** 12/2020  
**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-R0667S/L v1.0

Bts(alpha)I Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0667LVIAL	Bts(alpha)I	10031397	Pass
B7204SVIAL	CutSmart® Buffer	10031565	Pass

Assay Name/Specification	Lot # 10031396
<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 50 units of BtsI incubated for 4 hours at 55°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Functional Test (15 minute Digest)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of BtsI incubated for 15 minutes at 55°C results in complete digestion as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 10-fold over-digestion of Lambda DNA with BtsI, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~75% can be recut with BtsI.</p>	Pass
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 10 units of BtsI incubated for 16 hours at 55°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass

Assay Name/Specification	Lot # 10031396
<p><b>Protein Purity Assay (SDS-PAGE)</b> Bts1 is <math>\geq 95\%</math> 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.




---

Penghua Zhang  
Production Scientist  
07 Dec 2018




---

Michael Tonello  
Packaging Quality Control Inspector  
14 Jan 2019