

## New England Biolabs Certificate of Analysis

**Product Name:** BspQI  
**Catalog Number:** R0712S  
**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 50°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10064760  
**Expiration Date:** 10/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 500 mM KCl , 20 mM Tris-HCl (pH 7.0), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 0.10 % TritonX-100 , 500 µg/ml BSA  
**Specification Version:** PS-R0712S/L v2.0

BspQI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0712SVIAL	BspQI	10058173	Pass
B7203SVIAL	NEBuffer™ 3.1	10053974	Pass

Assay Name/Specification	Lot # 10064760
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled M13mp18 DNA and a minimum of 10 units of BspQI incubated for 4 hours at 50°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 3.1 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 BspQI incubated for 4 hours at 50°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 BspQI, >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 BspQI.	Pass
<b>Non-Specific DNase Activity (16 hour)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 10 Units of BspQI incubated for 16 hours at 50°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE:	Pass

Assay Name/Specification	Lot # 10064760
<p>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> <p><b>Protein Purity Assay (SDS-PAGE)</b> BspQI is &gt;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.



Stephanie Cornelio  
Production Scientist  
05 Nov 2019



Jay Minichiello  
Packaging Quality Control Inspector  
12 Feb 2020