NEW ENGLAND BioLabs Inc.
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240 County Road
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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:	*10058174*
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	10053972	**Pass**

Assay Name/Specification	Lot # 10058174
Endonuclease Activity (Nicking) 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 50ºC results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 50 units of BspQI incubated for 4 hours at 50ºC releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) 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 16ºC. Of these ligated fragments, >95% can be recut with BspQI.	**Pass**
Non-Specific DNase Activity (16 hour) 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 50ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE:	**Pass**

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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.	
Protein Purity Assay (SDS-PAGE) BspQI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	**Pass**

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

Doreen Duquette
Production Scientist
16 Sep 2019

Jay Minichiello
Packaging Quality Control Inspector
06 Nov 2019