

New England Biolabs Certificate of Analysis

Product Name: BspQI
Catalog #: R0712S/L
Concentration: 10,000 units/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.
Lot #: 0021301
Assay Date: 01/2013
Expiration Date: 01/2014
Storage Temp: -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 v1.0
Effective Date: 24 Apr 2013

Assay Name/Specification (minimum release criteria)	Lot #0021301
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 50°C 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] <i>E. coli</i> DNA and a minimum of 50 units of BspQI incubated for 4 hours at 50°C 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 16°C. 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 50°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE: 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.	Pass
Protein Purity Assay (SDS-PAGE) - BspQI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass

* The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.



Authorized by
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24 Apr 2013



Inspected by
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14 Feb 2014

