New England Biolabs
Certificate of Analysis

Product Name:	*BspEI*
Catalog Number:	*R0540S*
Concentration:	*10,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 μg of Lambda DNA (dam) in 1 hour at 37°C in a total reaction volume of 50 µl.*
Lot Number:	*10040231*
Expiration Date:	*03/2021*
Storage Temperature:	*-20°C*
Storage Conditions:	*300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA*
Specification Version:	*PS-R0540S/L v1.0*

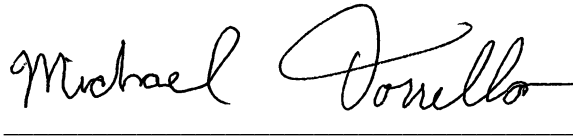| BspEI Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
R0540SVIAL	BspEI	10040232	**Pass**
B7203SVIAL	NEBuffer™ 3.1	10041001	**Pass**

Assay Name/Specification	Lot # 10040231
Blue-White Screening (Terminal Integrity) A sample of LITMUS38i vector linearized with a 10-fold excess of BspEI, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	**Pass**
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 3.1 containing 1 μg of supercoiled PhiX174 DNA and a minimum of 10 Units of BspEI incubated for 4 hours at 37ºC 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 [³H] E. coli DNA and a minimum of 100 units of BspEI incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda dam- DNA with BspEI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated	**Pass**

New England BioLabs Inc.

240 County Road
Ipswich, MA 01938-2723

Tel 978-927-5054
Fax 978-921-1350

www.neb.com
info@neb.com

Assay Name/Specification	Lot # 10040231
fragments, >95% can be recut with BspEI.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda dam- DNA and a minimum of 50 units of BspEI incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

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

_____

Jianying Luo
Production Scientist
26 Mar 2019

_____

Michael Tonello
Packaging Quality Control Inspector
29 May 2019

nqa ISO 9001 Registered Quality Management
nqa ISO 13485 Registered Medical Devices
nqa ISO 14001 Registered Environmental Management

R0540S / Lot: 10040231
Page 2 of 2