New England Biolabs
Product Specification

Product Name: BstEII
Catalog #: R0162S/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 60°C in a total reaction volume of 50 µl.
Shelf Life: 24 months
Storage Temp: -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-R0162S/L v1.0
Effective Date: 25 Jun 2013

Assay Name/Specification (minimum release criteria)

**Endonuclease Activity (Nicking)** - A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 30 units of BstEII incubated for 4 hours at 60°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

**Exonuclease Activity (Radioactivity Release)** - A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [³²P]E. coli DNA and a minimum of 50 units of BstEII incubated for 4 hours at 60°C releases <0.1% of the total radioactivity.

**Ligation and Recutting (Terminal Integrity)** - After a 10-fold over-digestion of Lambda DNA with BstEII, >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 BstEII.

**Non-Specific DNase Activity (16 Hour)** - A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 50 Units of BstEII incubated for 16 hours at 60°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

* 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.

Derek Robinson
Director of Quality Control

Date 25 Jun 2013