

## New England Biolabs Product Specification

**Product Name:** *HpyAV*  
**Catalog #:** *R0621S/L*  
**Concentration:** *2,000 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 37°C in a total reaction volume of 50 µl.*  
**Shelf Life:** *24 months*  
**Storage Temp:** *-20 °C*  
**Storage Conditions:** *300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 0.5mM NiSO<sub>4</sub>, 50% Glycerol, 200 µg/ml BSA*  
**Specification Version:** *PS-R0621S/L v2.0*  
**Effective Date:** *20 Feb 2015*

### Assay Name/Specification (minimum release criteria)

**Exonuclease Activity (Radioactivity Release)** - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] *E. coli* DNA and a minimum of 20 units of HpyAV incubated for 4 hours at 37°C releases <0.3% of the total radioactivity.

**Ligation and Recutting (Terminal Integrity)** - After a 2-fold over-digestion of Lambda DNA with HpyAV, ~50% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~50% can be recut with HpyAV.

**Non-Specific DNase Activity (16 Hour)** - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 10 Units of HpyAV incubated for 16 hours at 37°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 20 Feb 2015

