

## New England Biolabs Product Specification

**Product Name:** *TaqαI*  
**Catalog #:** R0149S/L  
**Concentration:** 20,000 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 65°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, 50% Glycerol, 500 μg/ml BSA  
**Specification Version:** PS-R0149S/L v1.0  
**Effective Date:** 06/28/2013

### 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 200 units of TaqαI incubated for 4 hours at 65°C releases <0.1% of the total radioactivity.

**Ligation and Recutting (Terminal Integrity)** - After a 20-fold over-digestion of Lambda DNA DNA with TaqαI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 25°C. Of these ligated fragments, >95% can be recut with TaqαI.

**Non-Specific DNase Activity (16 Hour)** - A 50 μl reaction in CutSmart™ Buffer containing 1 μg of Lambda DNA DNA and a minimum of 200 Units of TaqαI incubated for 16 hours at 65°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.



Date 06/28/2013

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