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## New England Biolabs Certificate of Analysis

Product Name:	HaeIII
Catalog #:	R0108S/L
Concentration:	10,000 units/ml
Unit Definition:	One unit is defined as the amount of enzyme required to digest 1 $\mu$ g of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 $\mu$ l.
Lot #:	0341505
Assay Date:	05/2015
Expiration Date:	5/2017
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-R0108S/L v1.0
Effective Date:	30 Sep 2013

Assay Name/Specification (minimum release criteria)	Lot #0341505
<b>Exonuclease Activity (Radioactivity Release)</b> - A 50 $\mu$ l reaction in CutSmart <sup>TM</sup> Buffer containing 1 $\mu$ g of a mixture of single and double-stranded [ <sup>3</sup> H] <i>E. coli</i> DNA and a minimum of 100 units of HaeIII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> - After a 20-fold over-digestion of Lambda DNA with HaeIII, >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 HaeIII.	Pass
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart <sup>™</sup> Buffer containing 1 µg of Lambda DNA and a minimum of 100 Units of HaeIII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> - HaeIII 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.

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Authorized by Derek Robinson 30 Sep 2013



Theren R. R. Returning

Inspected by Terry Petronzio 17 Jun 2015