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## New England Biolabs Certificate of Analysis

Product Name:	SfaNI
Catalog #:	R0172S/L
Concentration:	2,000 units/ml
Unit Definition:	One unit is defined as the amount of enzyme required to digest 1 $\mu$ g of PhiX174 RF I DNA in 1 hour at 37°C in a total reaction volume of 50 $\mu$ l.
Lot #:	1101508
Assay Date:	08/2015
Expiration Date:	8/2017
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-R0172S/L v1.0
Effective Date:	06 Nov 2014

Assay Name/Specification (minimum release criteria)	Lot #1101508
<b>Exonuclease Activity (Radioactivity Release)</b> - A 50 $\mu$ l reaction in NEBuffer 3.1 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 6 units of SfaNI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> - After a 2-fold over-digestion of PhiX174 DNA with SfaNI, ~75% 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 SfaNI.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> - A 50 $\mu$ l reaction in NEBuffer 3.1 containing 1 $\mu$ g of PhiX174 DNA and a minimum of 2 Units of SfaNI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	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 06 Nov 2014



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Inspected by Penghua Zhang 18 Aug 2015