

## New England Biolabs Certificate of Analysis

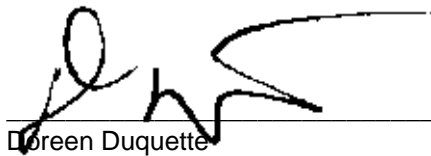
**Product Name:** *NheI*  
**Catalog Number:** *R0131L*  
**Concentration:** *10,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (HindIII digest) in 1 hour at 37°C in a total reaction volume of 50 µl.*  
**Lot Number:** *10042389*  
**Expiration Date:** *04/2021*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *250 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml BSA*  
**Specification Version:** *PS-R0131S/L v1.0*

NheI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0131LVIAL	NheI	10042390	Pass
B7202SVIAL	NEBuffer™ 2.1	10035939	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10038711	Pass

Assay Name/Specification	Lot # 10042389
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in NEBuffer 2.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 Units of NheI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 250 units of NheI 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 HindIII DNA with NheI, >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 NheI.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 2.1 containing 1 µg of Lambda HindIII DNA and a minimum	Pass

Assay Name/Specification	Lot # 10042389
of 50 Units of NheI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	

This product has been tested and shown to be in compliance with all specifications.



Dawn Duquette  
Production Scientist  
06 Feb 2019



Michael Tonello  
Packaging Quality Control Inspector  
15 May 2019