

## New England Biolabs Certificate of Analysis

**Product Name:** *NheI*  
**Catalog Number:** *R0131M*  
**Concentration:** *50,000 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:** *10032186*  
**Expiration Date:** *12/2020*  
**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-R0131M v1.0*

| NheI Component List |                              |            |                      |
|---------------------|------------------------------|------------|----------------------|
| NEB Part Number     | Component Description        | Lot Number | Individual QC Result |
| R0131MVIAL          | NheI                         | 10032187   | Pass                 |
| B7202SVIAL          | NEBuffer™ 2.1                | 0261805    | Pass                 |
| B7024SVIAL          | Gel Loading Dye, Purple (6X) | 10021131   | Pass                 |

| Assay Name/Specification   | Lot # 10032186 |
|--|----------------|
| <b>Endonuclease Activity (Nicking)</b><br>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><br>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><br>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><br>A 50 µl reaction in NEBuffer 2.1 containing 1 µg of Lambda HindIII DNA and a minimum   | Pass           |

| Assay Name/Specification  | Lot # 10032186 |
|---|----------------|
| 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.



Tony Spear-Alfonso  
Production Scientist  
08 Nov 2018



Michael Tonello  
Packaging Quality Control Inspector  
21 Dec 2018