New England Biolabs
Product Specification

**Product Name:** Nhel
**Catalog #:** R0131S/L
**Concentration:** 10,000 units/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.
**Shelf Life:** 24 months
**Storage Temp:** -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
**Effective Date:** 28 Jun 2013

<table>
<thead>
<tr>
<th>Assay Name/Specification (minimum release criteria)</th>
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<tbody>
<tr>
<td><strong>Endonuclease Activity (Nicking)</strong> - A 50 µl reaction in NEBuffer 2.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 Units of Nhel incubated for 4 hours at 37°C results in &lt;20% conversion to the nicked form as determined by agarose gel electrophoresis.</td>
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<td><strong>Exonuclease Activity (Radioactivity Release)</strong> - A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 250 units of Nhel incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</td>
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<td><strong>Ligation and Recutting (Terminal Integrity)</strong> - After a 20-fold over-digestion of Lambda HindIII DNA with Nhel, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with Nhel.</td>
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<td><strong>Non-Specific DNase Activity (16 Hour)</strong> - A 50 µl reaction in NEBuffer 2.1 containing 1 µg of Lambda HindIII DNA and a minimum of 50 Units of Nhel incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</td>
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</tbody>
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* 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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Derek Robinson
Director of Quality Control

Date 28 Jun 2013