

## New England Biolabs Certificate of Analysis

**Product Name:** Hgal  
**Catalog Number:** R0154S  
**Concentration:** 2,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of PhiX174 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Lot Number:** 10034663  
**Expiration Date:** 01/2021  
**Storage Temperature:** -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-R0154S/L v1.0

| Hgal Component List |                       |            |                      |
|---------------------|-----------------------|------------|----------------------|
| NEB Part Number     | Component Description | Lot Number | Individual QC Result |
| R0154SVIAL          | Hgal                  | 10034664   | Pass                 |
| B7201SVIAL          | NEBuffer™ 1.1         | 0131803    | Pass                 |

| Assay Name/Specification  | Lot # 10034663 |
|---|----------------|
| <p><b>Exonuclease Activity (Radioactivity Release)</b><br/>           A 50 µl reaction in NEBuffer 1.1 containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 2 units of Hgal incubated for 4 hours at 37°C releases &lt;0.2% of the total radioactivity.</p>    | Pass           |
| <p><b>Ligation and Recutting (Terminal Integrity)</b><br/>           After a 2-fold over-digestion of PhiX174 DNA with Hgal, &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 Hgal.</p>                                  | Pass           |
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>           A 50 µl reaction in NEBuffer 1.1 containing 1 µg of PhiX174 DNA and a minimum of 2 Units of Hgal incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass           |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>           Hgal is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>  | Pass           |

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



Penghua Zhang  
Production Scientist  
23 Jan 2019



Michael Tonello  
Packaging Quality Control Inspector  
28 Jan 2019