

## New England Biolabs Certificate of Analysis

**Product Name:** Hgal  
**Catalog Number:** R0154L  
**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:** 10020757  
**Expiration Date:** 08/2020  
**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
R0154LVIAL	Hgal	10019708	Pass
B7201SVIAL	NEBuffer™ 1.1	0121709	Pass

Assay Name/Specification	Lot # 10020757
<b>Exonuclease Activity (Radioactivity Release)</b> 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 <0.2% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 2-fold over-digestion of PhiX174 DNA with Hgal, >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 Hgal.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> 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.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> Hgal is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass

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



Penghua Zhang  
Production Scientist  
23 Aug 2018



Michael Tonello  
Packaging Quality Control Inspector  
10 Oct 2018