

## New England Biolabs Certificate of Analysis

**Product Name:**  $\Phi$ X174 RF II DNA  
**Catalog #:** N3022S/L  
**Concentration:** 1,000  $\mu$ g/ml  
**Unit Definition:** N/A  
**Lot #:** 1231401  
**Assay Date:** 01/2014  
**Expiration Date:** 01/2016  
**Storage Temp:** -20 °C  
**Storage Conditions:** 10 mM Tris-HCl (pH 8.0), 1 mM EDTA  
**Specification Version:** PS-N3022S/L v1.0  
**Effective Date:** 08 Jul 2014

Assay Name/Specification (minimum release criteria)	Lot #1231401
<b>A260/A280 Assay</b> - The ratio of UV absorption of $\Phi$ X174 RF II DNA at 260 and 280 nm is between 1.8 and 2.0.	<b>Pass</b>
<b>DNA Concentration (A260)</b> - The concentration of $\Phi$ X174 RF II DNA is between 1000 and 1050 $\mu$ g/ml as determined by UV absorption at 260 nm.	<b>Pass</b>
<b>Electrophoretic Pattern (Plasmid)</b> - The banding pattern of $\Phi$ X174 RF II DNA on a 1.2% agarose gel is evaluated against a control lot for sharpness and relative intensity as determined by gel electrophoresis using Ethidium Bromide.	<b>Pass</b>
<b>Non-Specific DNase Activity (DNA, 16 hour)</b> - A 50 $\mu$ l reaction in 1X NEBuffer 2 containing 5 $\mu$ g of $\Phi$ X174 RF II DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>Restriction Digest (Linearization)</b> - A 50 $\mu$ l reaction in CutSmart™ Buffer containing 5 $\mu$ g of $\Phi$ X174 RF II DNA and 20 units of XhoI incubated for 1 hour at 37°C produces > 95% linearization resulting in a single band of approximately 5386 bp as determined by agarose gel electrophoresis.	<b>Pass</b>



Authorized by  
Derek Robinson  
08 Jul 2014



Inspected by  
Vanessa Mathieu-Sheltry  
23 Jul 2014

