

## New England Biolabs Certificate of Analysis

**Product Name:** *PhiX174 RF I DNA*  
**Catalog Number:** *N3021L*  
**Concentration:** *1,000 µg/ml*  
**Unit Definition:** *N/A*  
**Packaging Lot Number:** *10242944*  
**Expiration Date:** *04/2026*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *10 mM Tris-HCl (pH 8.0), 1 mM EDTA*  
**Specification Version:** *PS-N3021S/L v1.0*

| PhiX174 RF I DNA Component List |                       |            |                      |
|---------------------------------|-----------------------|------------|----------------------|
| NEB Part Number                 | Component Description | Lot Number | Individual QC Result |
| N3021LVIAL                      | PhiX174 RF I DNA      | 10237450   | Pass                 |

| Assay Name/Specification   | Lot # 10242944 |
|--|----------------|
| <b>A260/A280 Assay</b><br>The ratio of UV absorption of $\phi$ X174 RF I DNA at 260 and 280 nm is between 1.8 and 2.0.   | <b>Pass</b>    |
| <b>DNA Concentration (A260)</b><br>The concentration of $\phi$ X174 RF I DNA is between 1000 and 1050 µg/ml as determined by UV absorption at 260 nm.  | <b>Pass</b>    |
| <b>Electrophoretic Pattern (Plasmid)</b><br>The banding pattern of $\phi$ X174 RF I 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><br>A 50 µl reaction in 1X NEBuffer 2 containing 5 µg of $\phi$ X174 RF I 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><br>A 50 µl reaction in CutSmart™ Buffer containing 5 µg of $\phi$ X174 RF I 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>    |

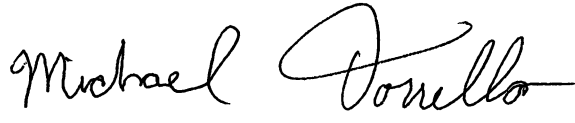
This product has been tested and shown to be in compliance with all specifications.

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01 May 2024



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Michael Tonello  
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16 May 2024