

## New England Biolabs Certificate of Analysis

**Product Name:** *PhiX174 RF I DNA*  
**Catalog Number:** *N3021S*  
**Concentration:** *1,000 µg/ml*  
**Unit Definition:** *N/A*  
**Lot Number:** *10021333*  
**Expiration Date:** *09/2020*  
**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
N3021SVIAL	PhiX174 RF I DNA	10021334	Pass

Assay Name/Specification	Lot # 10021333
<b>Electrophoretic Pattern (Plasmid)</b> 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> 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> 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>
<b>A260/A280 Assay</b> 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> 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>

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



Vanessa Mathieu-Sheltry  
Production Scientist  
07 Sep 2018



Michael Tonello  
Packaging Quality Control Inspector  
14 Nov 2018