

## New England Biolabs Certificate of Analysis

**Product Name:** *Mlul*  
**Catalog Number:** *R0198S*  
**Concentration:** *10,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.*  
**Lot Number:** *10023149*  
**Expiration Date:** *08/2020*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *100 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA*  
**Specification Version:** *PS-R0198S/L v1.0*

Mlul Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0198SVIAL	Mlul	10017506	Pass
B7203SVIAL	NEBuffer™ 3.1	10021113	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10021137	Pass

Assay Name/Specification	Lot # 10023149
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 100 units of Mlul incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 10-fold over-digestion of Lambda DNA with Mlul, &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 Mlul.</p>	Pass
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 100 Units of Mlul 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>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled pUC19 DNA and a minimum of 30 units of Mlul incubated for 4 hours at 37°C results in &lt;20% conversion</p>	Pass

Assay Name/Specification	Lot # 10023149
to the nicked form as determined by agarose gel electrophoresis.	

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



Stephanie Cornelio  
Production Scientist  
03 Aug 2018



Michael Tonello  
Packaging Quality Control Inspector  
15 Feb 2019