

## New England Biolabs Certificate of Analysis

**Product Name:** *Mlul*  
**Catalog Number:** *R0198L*  
**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:** *10017504*  
**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
R0198LVIAL	Mlul	10017505	Pass
B7203SVIAL	NEBuffer™ 3.1	10018441	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10013725	Pass

Assay Name/Specification	Lot # 10017504
<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 <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<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 <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of Lambda DNA with Mlul, >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 Mlul.	Pass
<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	Pass

Assay Name/Specification	Lot # 10017504
detectable nuclease degradation as determined by agarose gel electrophoresis.	

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



Tony Spear-Alfonso  
Production Scientist  
08 Aug 2018



Michael Tonello  
Packaging Quality Control Inspector  
31 Aug 2018