

## New England Biolabs Certificate of Analysis

**Product Name:** Mmel  
**Catalog Number:** R0637L  
**Concentration:** 2,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of PhiX174 RF I DNA in 1 hour at 37°C in 50 µl of reaction buffer.  
**Packaging Lot Number:** 10071648  
**Expiration Date:** 04/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA  
**Specification Version:** PS-R0637S/L v2.0

Mmel Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0637LVIAL	Mmel	10071646	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10070537	Pass
B7204SVIAL	CutSmart® Buffer	10074633	Pass

Assay Name/Specification	Lot # 10071648
<b>Protein Purity Assay (SDS-PAGE)</b> Mmel is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 20 units of Mmel 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 PhiX174 DNA with Mmel, ~75% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, 0% can be recut with Mmel.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of PhiX174 DNA and a minimum of 2 units of Mmel incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

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



Penghua Zhang  
Production Scientist  
18 Jun 2020



Michael Tonello  
Packaging Quality Control Inspector  
18 Jun 2020