

## New England Biolabs Certificate of Analysis

**Product Name:** Mmel  
**Catalog Number:** R0637S  
**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.  
**Lot Number:** 10043220  
**Expiration Date:** 04/2020  
**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
R0637SVIAL	Mmel	10043222	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10043902	Pass
B7204SVIAL	CutSmart® Buffer	10042965	Pass

Assay Name/Specification	Lot # 10043220
<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
<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

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



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Jianying Luo  
Production Scientist  
25 Apr 2019



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Michael Tonello  
Packaging Quality Control Inspector  
07 Jun 2019