

## 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:** 10160256  
**Expiration Date:** 05/2024  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 0.32 mM S-adenosylmethionine (SAM), 50% Glycerol, 500 µg/ml BSA (pH 7.4 @ 25°C)  
**Specification Version:** PS-R0637S/L v3.0

| Mmel Component List |                       |            |                      |
|---------------------|-----------------------|------------|----------------------|
| NEB Part Number     | Component Description | Lot Number | Individual QC Result |
| R0637LVIAL          | Mmel                  | 10151403   | Pass                 |
| B6004SVIAL          | rCutSmart™ Buffer     | 10156428   | Pass                 |

| Assay Name/Specification   | Lot # 10160256 |
|--|----------------|
| <b>Protein Purity Assay (SDS-PAGE)</b><br>Mmel is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.   | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>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><br>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>Exonuclease Activity (Radioactivity Release)</b><br>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           |

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

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