

## New England Biolabs Certificate of Analysis

**Product Name:** MseI  
**Catalog Number:** R0525S  
**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.  
**Packaging Lot Number:** 10076874  
**Expiration Date:** 01/2022  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA  
**Specification Version:** PS-R0525S/L v1.0

| MseI Component List |                              |            |                      |
|---------------------|------------------------------|------------|----------------------|
| NEB Part Number     | Component Description        | Lot Number | Individual QC Result |
| R0525SVIAL          | MseI                         | 10064254   | Pass                 |
| B7204SVIAL          | CutSmart® Buffer             | 10075569   | Pass                 |
| B7024SVIAL          | Gel Loading Dye, Purple (6X) | 10075964   | Pass                 |

| Assay Name/Specification  | Lot # 10076874 |
|---|----------------|
| <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 30 units of MseI incubated for 4 hours at 37°C releases <0.2% of the total radioactivity.     | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 10-fold over-digestion of Lambda DNA with MseI, >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 MseI.   | Pass           |
| <b>Non-Specific DNase Activity (16 Hour)</b><br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 100 Units of MseI 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  
08 Jul 2020



Michael Tonello  
Packaging Quality Control Inspector  
08 Jul 2020