

## New England Biolabs Certificate of Analysis

**Product Name:** Nt.BsmAI  
**Catalog Number:** R0121S  
**Concentration:** 5,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to convert 1 µg of supercoiled pBR322 DNA to open circular form in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10148313  
**Expiration Date:** 05/2024  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 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-R0121S/L v1.0

| Nt.BsmAI Component List |                       |            |                      |
|-------------------------|-----------------------|------------|----------------------|
| NEB Part Number         | Component Description | Lot Number | Individual QC Result |
| R0121SVIAL              | Nt.BsmAI              | 10148312   | Pass                 |
| B6004SVIAL              | rCutSmart™ Buffer     | 10148729   | Pass                 |

| Assay Name/Specification   | Lot # 10148313 |
|--|----------------|
| <b>Protein Purity Assay (SDS-PAGE)</b><br>Nt.BsmAI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.   | 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 50 units of Nt.BsmAI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.    | Pass           |
| <b>Non-Specific DNase Activity (16 Hour)</b><br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pBR322 DNA and a minimum of 50 units of Nt.BsmAI 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.

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10 May 2022



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10 May 2022