

## 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:** 10171780  
**Expiration Date:** 11/2024  
**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	10171778	Pass
B6004SVIAL	rCutSmart™ Buffer	10165689	Pass

Assay Name/Specification	Lot # 10171780
<b>Non-Specific DNase Activity (16 Hour)</b> 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
<b>Protein Purity Assay (SDS-PAGE)</b> Nt.BsmAI 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 50 units of Nt.BsmAI 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.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit [www.neb.com/trademarks](http://www.neb.com/trademarks) for additional information.

  
YunJie Sun  
Production Scientist  
18 Nov 2022

  
Michael Tonello  
Packaging Quality Control Inspector  
21 Nov 2022