

New England Biolabs Certificate of Analysis

Product Name: BsaAI
Catalog Number: R0531S
Concentration: 5,000 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.
Lot Number: 10018132
Expiration Date: 08/2020
Storage Temperature: -20°C
Storage Conditions: 250 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml BSA
Specification Version: PS-R0531S/L v1.0

BsaAI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0531SVIAL	BsaAI	10018133	Pass
B7204SVIAL	CutSmart® Buffer	10015394	Pass

Assay Name/Specification	Lot # 10018132
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 15 units of BsaAI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 25 units of BsaAI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) After a 5-fold over-digestion of Lambda DNA with BsaAI, >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 BsaAI.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 25 Units of BsaAI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

Assay Name/Specification	Lot # 10018132
<p>Protein Purity Assay (SDS-PAGE) BsaAI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>	<p>Pass</p>

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



Tony Spear-Alfonso
Production Scientist
23 Jul 2018



Josh Hersey
Packaging Quality Control Inspector
21 Aug 2018