

## New England Biolabs Certificate of Analysis

**Product Name:** *HaeIII Methyltransferase*  
**Catalog Number:** *M0224S*  
**Concentration:** *10,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme required to protect 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 10 µl against cleavage by HaeIII restriction endonuclease.*  
**Packaging Lot Number:** *10095236*  
**Expiration Date:** *01/2022*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *50 mM Tris-HCl, 50 mM KCl, 10 mM EDTA, 1 mM DTT, 200 µg/ml BSA, 50 % Glycerol, (pH 7.5 @ 25°C)*  
**Specification Version:** *PS-M0224S/L v1.0*

HaeIII Methyltransferase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0224SVIAL	HaeIII Methyltransferase	10095235	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10091460	Pass
B0224SVIAL	HaeIII Methyltransferase Reaction Buffer	10093152	Pass

Assay Name/Specification	Lot # 10095236
<b>Protein Purity Assay (SDS-PAGE)</b> HaeIII Methyltransferase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>RNase Activity (Extended Digestion)</b> A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of HaeIII Methyltransferase is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 100 units of HaeIII Methyltransferase 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>	Pass

Assay Name/Specification	Lot # 10095236
<p>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 100 units of HaeIII Methyltransferase incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p> <p><b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 100 units of HaeIII Methyltransferase incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<p><b>Pass</b></p>

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

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Production Scientist  
16 Mar 2021



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Packaging Quality Control Inspector  
16 Mar 2021