

## New England Biolabs Certificate of Analysis

**Product Name:** Alul  
**Catalog Number:** R0137S  
**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 rCutSmart Buffer in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10159530  
**Expiration Date:** 08/2024  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)  
**Specification Version:** PS-R0137S/L v2.0

Alul Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0137SVIAL	Alul	10159521	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10156427	Pass
B6004SVIAL	rCutSmart™ Buffer	10156433	Pass

Assay Name/Specification	Lot # 10159530
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of Lambda DNA with Alul, ~75% 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 Alul.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> Alul is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 50 units of Alul 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>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 10 units of Alul is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results	Pass

Assay Name/Specification	Lot # 10159530
<p>are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is <math>\leq 1</math> E. coli genome.</p> <p><b>Exonuclease Activity (Radioactivity Release)</b> A 50 <math>\mu</math>l reaction in rCutSmart™ Buffer containing 1 <math>\mu</math>g of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 30 units of AluI incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p> <p><b>Functional Testing (15 minute Digest)</b> A 50 <math>\mu</math>l reaction in rCutSmart™ Buffer containing 1 <math>\mu</math>g of Lambda DNA and 1 <math>\mu</math>l of AluI incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</p>	<p style="text-align: center;"><b>Pass</b></p> <p style="text-align: center;"><b>Pass</b></p>

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.



Penghua Zhang  
Production Scientist  
09 Sep 2022



Michael Tonello  
Packaging Quality Control Inspector  
09 Sep 2022