

## New England Biolabs Certificate of Analysis


**Product Name:** *Ecil*  
**Catalog Number:** *R0590L*  
**Concentration:** *2,000 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:** *10050622*  
**Expiration Date:** *07/2020*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA*  
**Specification Version:** *PS-R0590S/L v1.0*

Ecil Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0590LVIAL	Ecil	10050623	Pass
B7204SVIAL	CutSmart® Buffer	10047860	Pass

Assay Name/Specification	Lot # 10050622
<p><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 2 units of Ecil incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 2-fold over-digestion of Lambda DNA with Ecil, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with Ecil.</p>	Pass
<p><b>Non-Specific DNase Activity (16 hour)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 2 Units of Ecil incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE: although no nuclease degradation is detected under these conditions, extended incubations and/or high concentrations of this enzyme may result in star activity. See the product FAQ for recommended reaction conditions for this enzyme.</p>	Pass
<p><b>Protein Purity Assay (SDS-PAGE)</b></p>	Pass

Assay Name/Specification	Lot # 10050622
Ecil is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	

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

  
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Doreen Duquette  
Production Scientist  
20 Jun 2019

  
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Jay Minichiello  
Packaging Quality Control Inspector  
08 Aug 2019