

## New England Biolabs Certificate of Analysis

**Product Name:** Exonuclease V (RecBCD)  
**Catalog Number:** M0345L  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to produce 1 nmol of acid-soluble deoxyribonucleotide from double-stranded DNA in 30 minutes at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10238332  
**Expiration Date:** 11/2025  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.1% Triton®X-100, (pH 7.5 @ 25°C)  
**Specification Version:** PS-M0345S/L v1.0

Exonuclease V (RecBCD) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
P0756SVIAL	Adenosine 5'-Triphosphate (ATP)	10211010	Pass
M0345LVIAL	Exonuclease V (RecBCD)	10221818	Pass
B7004SVIAL	NEBuffer™ 4	10184703	Pass

Assay Name/Specification	Lot # 10238332
<p><b>Endonuclease Activity (Nicked Double-Stranded DNA)</b>            A 50 µl reaction in NEBuffer 4 supplemented with 1 mM ATP containing 1 µg of nicked PhiX174 RF II DNA and a minimum of 50 units of Exonuclease V (RecBCD) incubated for 4 hours at 37°C results in &lt;10% loss in PhiX174 RF II DNA as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in NEBuffer 4 supplemented with 1 mM ATP containing 1 µg of supercoiled PhiX174 RF I DNA and a minimum of 100 units of Exonuclease V (RecBCD) incubated for 4 hours at 37°C results in &lt;10% loss in supercoiled DNA as determined by agarose gel electrophoresis.</p>	<b>Pass</b>
<p><b>Protein Purity Assay (SDS-PAGE)</b>            Exonuclease V (RecBCD) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b></p>	<b>Pass</b>

Assay Name/Specification	Lot # 10238332
A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 10 units of Exonuclease V (RecBCD) is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	

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

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22 Nov 2023



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