

## New England Biolabs Certificate of Analysis

**Product Name:** *FatI*  
**Catalog Number:** *R0650L*  
**Concentration:** *2,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme required to digest 1 µg of pUC19 DNA in NEBuffer r2.1 in 1 hour at 55°C in a total reaction volume of 50 µl.*  
**Packaging Lot Number:** *10203107*  
**Expiration Date:** *08/2025*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *10 mM Tris-HCl, 50 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)*  
**Specification Version:** *PS-R0650S/L v2.0*

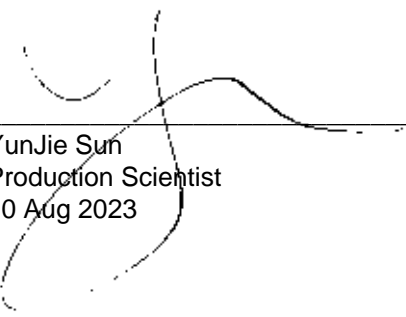
FatI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0650LVIAL	FatI	10201947	Pass
B6002SVIAL	NEBuffer™ r2.1	10173667	Pass

Assay Name/Specification	Lot # 10203107
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 10 units of FatI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of pUC19 DNA with FatI, >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 FatI.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of pUC19 DNA and a minimum of 10 units of FatI incubated for 16 hours at 55°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> FatI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass

Assay Name/Specification	Lot # 10203107
<p><b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 2 units of Fat1 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 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>Pass</b></p>


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

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10 Aug 2023




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18 Aug 2023