

New England Biolabs Product Specification

Product Name: Phusion[®] High-Fidelity PCR Kit
Catalog #: E0553S/L
Kit Components: 10 kb Control Primer Mix (S0536)
100% DMSO (B0515)
1.3 kb Control Primer Mix (S0535)
Phusion[®] HF Buffer Pack (B0518)
Phusion[®] GC Buffer Pack (B0519)
Control Lambda Template (N3010)
Deoxynucleotide (dNTP) Solution Mix (N0447)
MgCl₂ solution (B0510)
Phusion[®] High-Fidelity DNA Polymerase (M0530)
Quick-Load DNA Marker, Broad Range (N0303)

Shelf Life: 24 months
Storage Temp: -20°C
Specification Version: PS-E0553S/L v1.0
Effective Date: 30 Apr 2018

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking, Polymerase, dNTP) - A 50 µl reaction in NEBuffer 2 in the presence of 200 µM dNTPs containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 units of Phusion[®] DNA Polymerase incubated for 4 hours at either 37°C or 72°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

PCR Amplification (20 kb Lambda DNA) - A 50 µl reaction in Phusion[®] HF Buffer in the presence of 200 µM dNTPs and 1 µM primers containing 10 ng Lambda DNA with 1 unit of Phusion[®] DNA Polymerase for 22 cycles of PCR amplification results in the expected 20 kb product.

PCR Amplification (7.5 kb Human Genomic DNA) - A 50 µl reaction in Phusion[®] HF Buffer in the presence of 200 µM dNTPs and 1 µM primers containing 50 ng Human Genomic DNA with 1 unit of Phusion[®] DNA Polymerase for 30 cycles of PCR amplification results in the expected 7.5 kb product.

* **Individual Product Component Note** - Standard Quality Control Tests are performed for each component included in Phusion[®] High-Fidelity PCR Kit and meet the designated specifications.



Date 30 Apr 2018

Derek Robinson
Director of Quality Control

