

## New England Biolabs Product Specification

*Product Name:* M13KO7 Helper Phage  
*Catalog #:* N0315S  
*Concentration:*  $1 \times 10^{11}$  pfu/ml  
*Shelf Life:* 24 months  
*Storage Temp:* -20°C  
*Storage Conditions:* 1X PBS, 50% Glycerol  
*Specification Version:* PS-N0315S v1.0  
*Effective Date:* 23 Feb 2018

### Assay Name/Specification (minimum release criteria)

**Absolute Phage Titer** - Infection of a mid-log culture of *E. coli* ER2690 with M13KO7 Helper Phage followed by plating, yields  $\geq 1 \times 10^{11}$  pfu/ml.

**Functional Testing (Helper Ratio)** - Superinfection of an early-log culture of *E. coli* ER2738/pLITMUS 38 with  $3 \times 10^8$  pfu/ml M13KO7, followed by incubation for 18 hours in the presence of 70  $\mu\text{g}$  /ml kanamycin yields > 10-fold excess of packaged phagemid DNA over helper phage.

**Viable Cell Titer** - Plating a 300  $\mu\text{l}$  suspension of M13KO7 Helper Phage for viable cells on LB agar yields a titer of  $< 1 \times 10^2$  cfu/ml.



Date 23 Feb 2018

Derek Robinson  
Director of Quality Control

