

## New England Biolabs Product Specification

*Product Name:* NEB® Golden Gate Assembly Kit (BsmBI-v2)  
*Catalog #:* E1602S/L  
*Kit Components:* NEB® Golden Gate Enzyme Mix (BsmBI-v2) (M2617)  
pGGaselect Destination Plasmid (N0309)  
T4 DNA Ligase Reaction Buffer (B0202)  
*Shelf Life:* 24 months  
*Storage Temp:* -20°C  
*Specification Version:* PS-E1602S/L v1.0  
*Effective Date:* 20 Dec 2019

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

**Functional Testing (Golden Gate Assembly)** - A 20 µl reaction containing 1X T4 DNA Ligase Buffer, 75 ng pGGaselect (Golden Gate destination plasmid, CamR), 75 ng each of 5 plasmids carrying fragments of a gene cassette encoding LacI/ *lacZ* and 1 µl Golden Gate Enzyme Mix (BsmBI-v2) containing T4 DNA Ligase (750U) and BsmBI-v2 (30U) is incubated for 30 cycles of 42°C for 1 minute, 16°C for 1 minute, then at 60°C for 5 minutes. Successfully assembled fragments result in functional *lacZ* gene expression in pGGaselect vector and yield blue colonies on an IPTG/Xgal/Chloramphenicol plate. Transformation of T7 Express Competent *E. coli* (High Efficiency) (NEB #C2566) with 2 µl of the assembly reaction yields >250 colonies and >80% blue colonies when 5% of the outgrowth is spread on an IPTG/ Xgal/Chloramphenicol plate and incubated overnight at 37°C.

\* **Individual Product Component Note** - Standard Quality Control Tests are performed for each component included in NEB® Golden Gate Assembly Kit (BsmBI-v2) and meet the designated specifications.



Date 20 Dec 2019

Derek Robinson  
Director of Quality Control

