New England Biolabs
Product Specification

**Product Name:** NEB® Golden Gate Assembly Kit (BsaI-HFv2)  
**Catalog #:** E1601S/L  
**Kit Components:**
- NEB® Golden Gate Enzyme Mix (M2616)  
- pGGA Destination Plasmid (N2615)  
- T4 DNA Ligase Reaction Buffer (B0202)

**Shelf Life:** 24 months  
**Storage Temp:** -20°C  
**Specification Version:** PS-E1601S/L v1.0  
**Effective Date:** 15 Oct 2018

<table>
<thead>
<tr>
<th>Assay Name/Specification (minimum release criteria)</th>
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<tr>
<td><strong>Functional Testing (Golden Gate Assembly)</strong> - A 20 µl reaction containing 2 µl of T4 DNA Ligase Reaction Buffer, 75 ng pGGA (Golden Gate destination plasmid, CamR), 75 ng each of 5 plasmids carrying fragments of a gene encoding lacI/Z, and 1 µl NEB® Golden Gate Enzyme Mix is incubated for 30 cycles of 37°C for 1 minute, 16°C for 1 minute, and then at 60°C for 5 minutes to linearize any remaining plasmid. Successfully assembled fragments result in lacI/Z gene in the pGGA 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 &gt;250 colonies and &gt;80% blue colonies when 5% of the outgrowth is spread on an IPTG/Xgal/Chloramphenicol plate and incubated overnight at 37°C.</td>
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* **Individual Product Component Note** - Standard Quality Control Tests are performed for each component included in NEB® Golden Gate Assembly Kit (BsaI-HFv2) and meet the designated specifications.

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Derek Robinson  
Director of Quality Control

Date 15 Oct 2018