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## *FOUNDATION ssDNA™ Certificate of Analysis*

**Product #:** D441
**Storage temperature:** -20°C
**Storage conditions:** 10 mM Tris-HCl (pH 8.0), 1 mM EDTA
**Expiration date:**

**Procedure:** QAL-P-001
**Procedure revision:** 01
**Operator:**
**Assay Date:**

| **Assay Name/Specification** (minimum release criteria; scored as PASS/FAIL) | **Lot #:** |
|---|---|
| **A260/A280 Assay** - The ratio of UV absorption of M13 single-stranded DNA at 260 and 280 nm is between 1.8 and 2.0. | |
| **DNA Concentration (A260) -** The concentration of M13 single-stranded DNA is at least 100nM as determined by UV absorption at 260 nm according the length and molecular weight of ssDNA. 7249≥0.22mg/mL, 7308 ≥ 0.23mg/ml, 7560 ≥ 0.23 mg/ml, 8064 ≥ 0.25mg/ml | |
| **S1 nuclease sensitivity** - A 20µl reaction of S1 nuclease (ThermoScientific Cat. No: EN0321) containing 0.3pmol of M13 ssDNA and 100 units of S1 Nuclease and 1X buffer incubated for 1 hour at 37 °C results in complete digestion of DNA as determined by gel electrophoresis. | |
| **Non-specific DNase Activity** - A 50µL reaction in 1X buffer (10mM Tris-HCl, 50mM NaCl, 10mM MgCl2, 1mM DTT, pH 7.9) containing 0.3pmol of M13 ssDNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | |
| **Electrophoretic pattern** - The banding pattern of 0.3pmol of M13 ssDNA on a 1% agarose gel is evaluated against a control lot for relative band intensity as determined by gel electrophoresis and ethidium bromide staining. | |
| **DNA origami assembly** - Single-stranded DNA is folded in a 50µl origami folding reaction results in complete incorporation of 1pmol of M13 ssDNA in the presence of 10X excess staple oligonucleotides as evaluated by gel electrophoresis. | |
| **DNA sequencing -** The entire ssDNA nucleotide is determined by sequencing and compared to our reference sequence for complete identity. | |