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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, 7704 ≥ 0.24mg/ml, 8064 ≥ 0.25mg/ml, 8100 ≥ 0.25mg/ml, 8634 ≥ 0.27mg/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 electrophroresis 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 Sanger Sequencing and compared to our reference sequence for complete identity using a set of primers spread across the DNA sequence.	