COLOR CODING KEY

Spectrophotometry Measurements

Construct Group

Plasmid Group

Interlab

Cell Culture/Plating

Biobrick Group

Cyanobacteria Transformation Group

Experimental Verification

Plasmid & Construct Design Group

Week 12

August 19, 2018

Spectrophotometry Reading at 20:07 (Lin)

- Done at 750 nm with 1500 µL of culture
- No bicarb 33℃ (room temp 5/19) A= 0.986
- No bicarb room temp (room temp 5/19) A= 0.265
- 5 mM bicarb 33℃ (room temp 5/19) A= 1.001
- 5 mM bicarb room temp (room temp 5/19) A= 0.763
- 10 mM bicarb 33℃ (room temp 5/19) A= 1.091
- 10 mM bicarb room temp (room temp 5/19) A= 0.789
- 20 mM bicarb 33℃ (room temp 5/19) A= 0.957
- 20 mM bicarb room temp (room temp 5/19) A= 0.615

August 20, 2018

Experimental Verification (Elon)

- Mixed starch solution together (can be found in iGEM fridge) - 0.25 g/L of starch
- Did a practice run for sucrose assay, seems fairly accurate but plate reader cannot be used (need a 510 nm filter). Spec will do (use triplicates)
- Results: blank: A= 0.000, D-glucose control: A=1.163, Glucose from flour A=0.051, Sucrose from flour = 0.124. Correlates to 0.022 g/L of glucose and 0.060 g/L of sucrose, which roughly matches the percentages in the 0.25g/L of starch (9.6% glucose and 28.8% sucrose by mass respectively)
- 150 mM NaCl, 8 mM of HEPES, BG-11 50 mL, 1 mL of cyano inoculum

Biobrick Group (Natalie)

- Miniprepped idia V2 #4, idiA v2 #5, cpc 560 #1 , psba2 #3
- Supplemented all of the cultures with 2 mL LB + Spec

Spectrophotometry Reading at 15:46 (Natalie)

- Done at 750 nm with 1500 µL of culture
- No bicarb 33℃ (room temp 5/19) A= 0.910
- No bicarb room temp (room temp 5/19) A= 0.280

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- 5 mM bicarb 33℃ (room temp 5/19) A= 1.068
- 5 mM bicarb room temp (room temp 5/19) A= 0.816
- 10 mM bicarb 33℃ (room temp 5/19) A= 1.092
- 10 mM bicarb room temp (room temp 5/19) A= 0.831
- 20 mM bicarb 33℃ (room temp 5/19) A= 1.068
- 20 mM bicarb room temp (room temp 5/19) A= 0.649

August 21, 2018

Biobrick Group (Natalie)

- Nanodropped miniprep from yesterday
    - Cpc 560 #1 = 85.0 ng/µL , good
    - idiA v2 #4 = 173.6 ng/µL, good
    - idiA v2 #5 = 186.4 ng/µL, good
    - psbA2 #3 = 198.7 ng/µL, good
- RE digested Minipreps with EcoRI and PstI

Spectrophotometry Reading at 15:00 (Natalie)

- Done at 750 nm with 1500 µL of culture
- No bicarb 33℃ (room temp 5/19) A= 0.808
- No bicarb room temp (room temp 5/19) A= 0.296
- 5 mM bicarb 33℃ (room temp 5/19) A= 1.231
- 5 mM bicarb room temp (room temp 5/19) A= 0.870
- 10 mM bicarb 33℃ (room temp 5/19) A= 1.435
- 10 mM bicarb room temp (room temp 5/19) A= 0.870
- 20 mM bicarb 33℃ (room temp 5/19) A= 1.483
- 20 mM bicarb room temp (room temp 5/19) A= 0.678

August 22, 2018

Spectrophotometry Reading at 14:32 (Natalie/Jenn)

- Done at 750 nm with 1500 µL of culture
- No bicarb room temp (room temp 5/19) A= 0.368
- 5 mM bicarb 33℃ (room temp 5/19) A= 1.493

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- 5 mM bicarb room temp (room temp 5/19) A= 1.067
- 10 mM bicarb 33℃ (room temp 5/19) A= 1.321
- 10 mM bicarb room temp (room temp 5/19) A= 0.752
- 20 mM bicarb 33℃ (room temp 5/19) A= 1.594
- 20 mM bicarb room temp (room temp 5/19) A= 1.041

Biobrick Group (Natalie/Jenn)

- Mini-prepped cpc 560 1, cpc 560 2, cpc560 3, cpc 560 5, psbA2 3, psbA2 4, psbA2 5, lone cscB 2, lone cscB 3, new cpc 2, new cpc 5
- Reinoculated the cultures with LB and Spec

Plasmid Group (Natalie/Jenn)

- Ran Colony PCR products on a gel
- CPC Colony gel
    - 1. 1kb ladder
    - 2. CPC Col 2 1
    - 3. CPC col 2 2
    - 4. CPC Col 2 3
    - 5. CPC Col 3 1
    - 6. CPC Col 3 2
    - 7. CPC Col 3 3
- CPC 560 gel
    - 1. 1kb ladder
    - 2. CPC 560 col 2 1
    - 3. CPC 560 col 2 2
    - 4. CPC 560 col 2 3
    - 5. CPC 560 col 3 1
    - 6. CPC 560 col 3 2
    - 7. CPC 560 col 3 3

August 23, 2018

Biobrick Group (Natalie/Priya)

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- Miniprepped constructs

Cyanobacteria Transformation Group

- Transformation of cyanobacteria with 8/4 from 8/1 (UTEX Collier 7/23 Culture 1) with