

Campaign 11

Operations Summary

Stan Mayfield Biorefinery Cellulosic Research and Demonstration Plant

Prepared by Joe Sagues, Director of Operations
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Operations - Campaign 11

03/09/2015 – 03/13/2015

Experimental plan notes:

1. Propagation hydrolysate: 50% 190C
2. Pretreatment temperature: 185C
3. Liquefaction: 15% solids with 5% enzyme.
4. Fourth campaign trying the new experimental plan of conducting smaller scale fermentations in the propagator 3's, but with different nutrient concentrations.

Operation problems & resolutions:

1. Slow growth in propagator 2s
 - a. Problem:
 - i. Both propagator 2A and 2B grew very slowly again.
 - b. Resolution:
 - i. Going to move back to 30% 185C hydrolysate.
 - c. Status:
 - i. Resolved.
2. Very little growth in the propagator 3.
 - a. Problem:
 - i. Due to being so behind on schedule from the slow growth in the propagator 2s, it was decided to only move forward with propagator 2B. The growth in propagator 3B was very slow. Ismael believed the problem was due to the weak seed from propagator 2B – the cells were not healthy.
 - b. Resolution:
 - i. Stronger seed from propagator 2.
 - c. Status:
 - i. Resolved, but still optimizing.