



Colorado School of Mines Office for Technology Transfer

Optimized Flocculation of Algae Using Cationic Polymers

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Description: This invention describes a method to use a small concentration of cationic polymer to flocculate algae cells in approximately 40 minutes compared to the 30+ hours for the cells to flocculate and settle without additives. Flocculation and dewatering algae cells is one of the largest challenges in creating large scale biofuels from algae. Many processes like centrifugation are not practical at large scales to dewater the cells. In our method, the addition of the polymer requires less than 1 wt% polymer to complete the task and does not require large amounts of energy to perform or extra processing steps to recover the flocculent. The optimal polymer concentration has been preliminarily determined and the process does not improve by the addition of more polymer.

Potential Areas of Application

- Biofuels processing
- Algal development

Main Advantages of this Invention

- Simple process with no extra steps
- Small amount necessary for optimal dose
- No extra energy needed
- Significantly faster and able to be used on a large scale

Intellectual Property Status: Provisional patent filed June 22, 2011

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.

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