

Tube Flocculator Team Detailed Task List, 2011 Fall Team

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Review work and experiments about Tube Flocculator from previous semesters

- 08/09/2011-11/09/2011 All team members
- Use the AguaClara Wiki page to find some information about the previous work in Tube Flocculator.
- Have a basic concept about the mechanisms of the AguaClara technology, especially about the flocculator.

Literature review

- 12/09/2011-01/10/2011 Huifei Wu & Danhong Luo
- Search papers with key words like 'tube flocculator', 'PACl', and 'residual turbidity', etc.
- Develop a basic understanding of the mechanisms by which coagulants enhance particle aggregation.
- Read papers on specific topics, and each team member exchange useful information at team meeting.
- Find interesting topics for future research.

Develop fundamental understanding about Tube Flocculator Experiments

- 08/09/2011-18/09/2011 Huifei Wu & Danhong Luo
- Do research with Karen, familiar with the experiment steps, experimental reagents.
- Learn how to use the experimental apparatus, software and operational controls.

Tube Flocculator Experiment

- 20/09/2011-30/09/2011 All team members

- The design of flocculator can be optimized by minimization of chemical use or minimization of overall carbon and ecological footprint.
- It is supposed that flocc attachment efficiency is a function of the magnitude of electrostatic repulsion and polar bond attraction. We try to find out a certain group size range of PACl, which is sufficient to create a strong bond between flocs.

Additional Possible Research Topics

- TBA All team members

Technical Writing

02/11/2011-01/12/2011 Huifei Wu & Danhong Luo

Summary all things we done this semester and prepare for a presentation.