

jhs373

Janak Shah's Individual Contribution Page

Fall 2017 Contributions

This semester I am serving as a team lead. I personally am involved in the outreach aspect of team leadership, and in contact with the different organizations that reach out to AguaClara. I am also a research adviser for Fluoride, which is determining whether a one or two reactor system is most viable for fluoride treatment.

Spring 2017 Contributions

This semester I will be working on the [Filter Constrictions Subteam](#). The goal of this subteam is to capture a video of particles moving through filter constrictions. The hypothesis being tested is that particles are captured preferentially at flow restrictions in sand filters. "The flow restrictions cause the streamlines to contract and thus particles that are near the sand (the edge of a pore) move closer to the edge at the contraction. This results in accelerated deposition of particles at contractions." The team will design a flow cell and flocculator with a 50 cm headloss and 1 min residence time. Different methods of capturing a video will be tested to observe what really occurs at constrictions.

Fall 2016 Contributions

This semester I will be working on the [Milli-Sedimentation Subteam](#). The goal of this subteam is to design a small-scale sedimentation apparatus using coffee straws and a 1 inch PVC pipe. The apparatus will function for both sedimentation and filtration. The viability of this apparatus will be tested by the ability to clean it as well as the different tests.

Spring 2016 Contributions

My goal for this semester to find a way to test microbiological water safety that is practical, efficient, and cheap. I plan on researching the standard different methods with my subteam and looking towards different methods from the standard ones as well. Finding a test that works well in the low resource setting of Honduras is difficult given the scarcity of resources. That is why the materials that we choose must be practical.