

Aerobic Granular Sequencing Batch Reactors (GSBRs)

Aerobic Granular Sequencing Batch Reactors (GSBRs)

1. Can we devise a low-tech way to cycle through different phases: drain, feed, anaerobic phase, then aeration?
2. Can startup be shortened by smart inoculation?
3. Can GSBRs be used effectively to further treat wastewater after a UASB process.
4. Can the amount of biogas produced by an upstream UASB provide enough methane to power aeration pumps?
5. Can we devise aeration schemes that don't require electricity? Or at least use a small amount (e.g that could be provided by a solar panel)
6. Can GSBRs be used to treat blackwater (high strength wastewater)?

Spring 2016

The AguaClara GSBR team has been researching ways to improve inoculation and granulation for aerobic granules. To do this, the team plans to explore the effect of certain parameters on granulation like types of inoculum or type of substrate by monitoring granulation in several reactors under different conditions. Future goals include testing GSBR resistance to high strength wastewater, pairing with the UASB team, and researching low-tech control and aeration.





Members

Amiel Middelman: ahm225@cornell.edu

Nisarg Gohil: nvg22@cornell.edu

Victoria Zhang: vxz3@cornell.edu

Documents

	Challenges	Tasks	Symposium	Final Presentation	Final Report
Spring '16					? Unknown Attachment ? Unknown Attachment
Fall '15	