

## Week 5 Report

This week testing methods were researched and experimented with in reducing dissolved oxygen in solutions. A YSI Pro20 Dissolved Oxygen measurement device was acquired, calibrated, and used. Experiments done to de-aerate solutions were performed, but with the goal of mostly familiarization and gauging accuracy rather than actual data acquisition.

### **Progress:**

#### Experiment 1:

The DO meter was used to measure the effect of running a stream of water in a vacuum chamber of -650 to -1000 mmHg of pressure. The stream was of the same diameter of the standard plastic tubing used with B&L Stellaris pc and Stellaris elite systems. The materials used, aside from the DO meter, were all found in B&L equipment packs and labs. This was done for convenience and simplicity, but to also research if present materials would be adequate to create our device so that no new materials would have to be manufactured.

#### Experiment 2:

The same procedure was used as experiment 1, but with smaller tubing used as infusion lines in retinal surgeries.

### **Comments:**

Experimental information (procedure, results, etc.) will be compiled into PowerPoints to give regular updates to Brian McCary. Data and more information is withheld in this report until we finalize with Brian McCary what can and cannot be shared. Additionally, we set up meetings next week on Sunday at 10:00 am and on Tuesday/Thursday at a yet to be determined time to meet to finalize our plans for a procedure to test the multiple other de-aeration methods, to gauge the accuracy of the first experiments, and to work on our preliminary report and presentation.