6/24/16

The first week of research already gave me a new insight in what it means to be a PhD student, especially since I had been working with one. It boggles the mind how necessary it is to pay attention to the small details. The experience is one that shows the rigor of being a full-fledged scientist. For example, before even beginning the experiment it was required to fish out a pool of scientific papers on the parameters of the experiment that would best fit our own. In doing an experiment, one must ultimately make the parameters and justify doing so as well.

The science behind this experiment involves primarily electrochemistry. This experiment will use voltammetry to try to find the reduction potentials of electron transfer mediators. ETM’s are molecules that undergo redox reactions. In other words, these molecules can shuttle electrons when they are reacting with other molecules or substances. When these ETM’s are oxidized or reduced, the voltammetry device will be able to scan the current.

The environmental applications are actually more drastic than one might think. The ETMs being studied are phenol and aniline. In the environment, there are many derivatives of these ETMs that are vital for many redox reactions. So far, it is the goal to compile data on as many different phenols and anilines.