

2010

MMC Internship Report



Food Chemistry Lab Assistant

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The position of MMC Food Chemistry Lab Assistant provides a very rewarding experience. There are many things to learn and many things to experience. And to be successful in the position it requires knowledge of the responsibilities and duties relating to the internship. For this purpose, in preparation for the MMC Food Chemistry Lab Assistant internship, I met with Dr. Fajardo, Prof. Little, Prof. Elias and the ISA Ms. Mund. At this meeting we established my responsibilities for each of the professors and the ISA. Additionally, successfully completing both the FCS 302 *Food Product Development and Quality Assurance Lab* and the FCS 401 *Food Chemistry and Analysis Lab* is necessary to be able to effectively meet the requirements of this internship. It also was very helpful for me to spend time reviewing my own lab reports from these classes as a reference before setting-up for the labs. My responsibilities related mainly to setting-up and cleaning-up the FCS 302 and FCS 401 lab classes, helping students in the classroom, assisting the professor, and working on new and old labs.



Figure 1. Setting-up for Lab

For the set-up of the labs I was required to be familiar with the scheduled labs so I would be able to set-up the appropriate equipment, reactants, food products, and glassware. I regularly checked if the materials needed for the labs were available, or if they were not I needed to contact the ISA in order to purchase the missing resources. This usually was done at least two weeks before the upcoming lab so

that there was enough time to be able to purchase the material. My responsibilities for the clean-up of the labs were to make sure the glassware was clean and put back into the proper place. I also needed to dispose or properly store unused chemicals and foods.

Assisting in the FCS 302 lab was an especially great opportunity because it expanded my experiences by allowing me to be responsible for planning ahead for what was needed in the labs for the coming weeks and to communicate to the ISA regarding what she needed to

purchase. This experience also allowed me to work in a team setting where I was able to develop a good working relationship with the professor and the ISA. I enjoyed working in this type of environment and would definitely be ready for more experiences like this. Ms. Mund and I also prepared reagents for the Vitamin C and the Peroxidase lab. In addition to preparing for

the FCS 302 lab, which included the set-up and break-down of the weekly experiments, I also assisted students with their experiments and help organize the final taste-test for the students who developed new food products. I also assisted Prof. Little in revising some of the lab



Figure 4 . FCS 302 Taste Test

Kjeldahl experiment with Prof. Ellis. I helped calculate the normality of solutions by titrating THAM with HCl. We started to use the Kjeldahl digester and encountered some problems, but we will continue next semester to have the lab ready for the class. I will be doing some research to see what information we were missing. I will also finish labeling the equipment files which now have their own file cabinet. My goal is to finish four equipment folders for FCS 401 lab before the spring semester. I scanned the instructions for each of the items of equipment which are used in



Figure 2. Performing Titration

instructions to make them more specific to the equipment available for use in the lab.

In addition to FCS 302, I also set-up and broke-down the lab experiments for the FCS 401 lab class. I likewise assisted the professor and students in this lab. One of the more exciting parts of this lab class was to do a trial run of the



Figure 3. Kjeldahl Lab: THAM - HCl Titration

the experiments for the FCS 401 lab class. Each group of students will have their own manual for all the equipment they will be using during the semester. This allows them to be more informed about the equipment and should allow them to use the equipment more efficiently. Moreover, it would be beneficial for future interns to be given the opportunity to help the professors in developing new labs or updating old labs for the different lab classes.

Regarding any inconveniences relating to the internship, there was only one minor inconvenience that I can recall. Since I needed to gain access to the lab classroom it was necessary for me to have a key to unlock the door. I generally needed to find someone who I knew had a key since there is no key maintained at any particular location or office. It also required me to interrupt professors or staff to have the room unlocked. While they were always helpful in doing this, it would have been less disruptive and efficient if I could have had a key to the lab (although I do not know whether department policy would allow this) or if there was a key maintained at the FCS office that would have been regularly available.

Overall, I feel that this internship gives students a great opportunity to learn more about the equipment used in the lab – giving them an advantage when using this equipment in the workforce. I enjoyed the internship. It provided me with a deeper knowledge of lab equipment and practices. This internship gave me the opportunities to coordinate the lab requirements and learn how to meet the expectations of diverse personnel, which will prepare me for a real world work experience. It also taught me to first understand how equipment functions and then take this understanding and figure out the solution for any problem that might occur.