**Electrophilic Aromatic Substitution**

**Discussion and Results**

This lab consisted of two parts. The first part was done twice with zero success, first try after heating it for 15 minutes and trying to place it into a small beaker, the solution fell immediately after pouring it into the beaker. Thus, a redo was required with little time and at the same part of the procedure the round bottom flask fell from my hands due to the reaction that it was extremely hot and my gloves melted. Although, that occurred after transferring the liquid part of the product into the beaker but, later on I figured out that most of my product was actually in the round bottom flask, which by then was thrown to waste. However, the TA advised me to take the crude product from the recovery jar, allowing me to continue the process for the next part. An approx. of 0.0502g of crude product was taken from the recovery jar. The TLC plate gave a good indication that the ferrocene was gone on the 10-minute spot, compared to the 5-minute spot., main purpose of it was to tell us whether the reaction went through or not. The main purpose of the column chromatography was to separate our product from a mixture of compounds. After the Column Chromatography the amount of product was close to none, there was but extremely little of it. Enough to perform a melting point test giving me the range of 79C-82.5C signifying that I was in the range of 81-83C that of pure monoacetyleferrocene. A limitation could be that while performing the column chromatography the silica kept drying up constantly, the TA had to remind me several times to wet it if not my results would be off the charts, which could be a limitation. In order to improve this lab in the future for me, personally, should be to take better care and caution while performing a lab experiment as I’ve repeatedly dropped products and shattered glassware.