**Fischer Esterification**

**Data Presentation**

* 0.2965g of Trans Cinnamic Acid
* Pre-weighed flask = 53.9854g
* Weight of flask= 54.0830g
* Percent Yield = 30.09%

**Discussion and Results**

Esters are formed by a direct reaction between carboxylic acid and alcohol. Esters always have a natural fruity smell to them. They are used in many different products, such as Beer, wine, fingernail polish remover, beverages, etc. An exception to this could be essential oils.

The main purpose for this lab was to synthesize an ester from carboxylic acid and alcohol. This reaction has a daily use of creating odor concentrates and flavorings. My acid was trans-Cinamic acid, which after synthesis it should’ve smelled like Strawberry, Basil, and/or Sichaun pepper. Although when synthesized, it smelled quiet similar to a mixture of rose water and basil. The product took a while to get into a green crystal formation (slimy) even after vacuuming it under pressure for around 40 minutes (due to the fact that around 40mL of DCM was added to it, thus it needed to be evaporated). After vacuuming it for 40 minutes there were no signs of DCM (by smell), leaving it to have 30.09% yield. There were a few limitations that could’ve contributed to the low percent yield, such as the technique used to separate the organic layer and the aqueous layer, it was hard to have them separated 100%. Thus, a small amount of the aqueous layer might’ve been mixed into the organic layer. Another limitation that contributed to the low percent yield, was the weighing machine, it displayed different weights for the same side arm flask. Thus, contributing to the low percent yield.