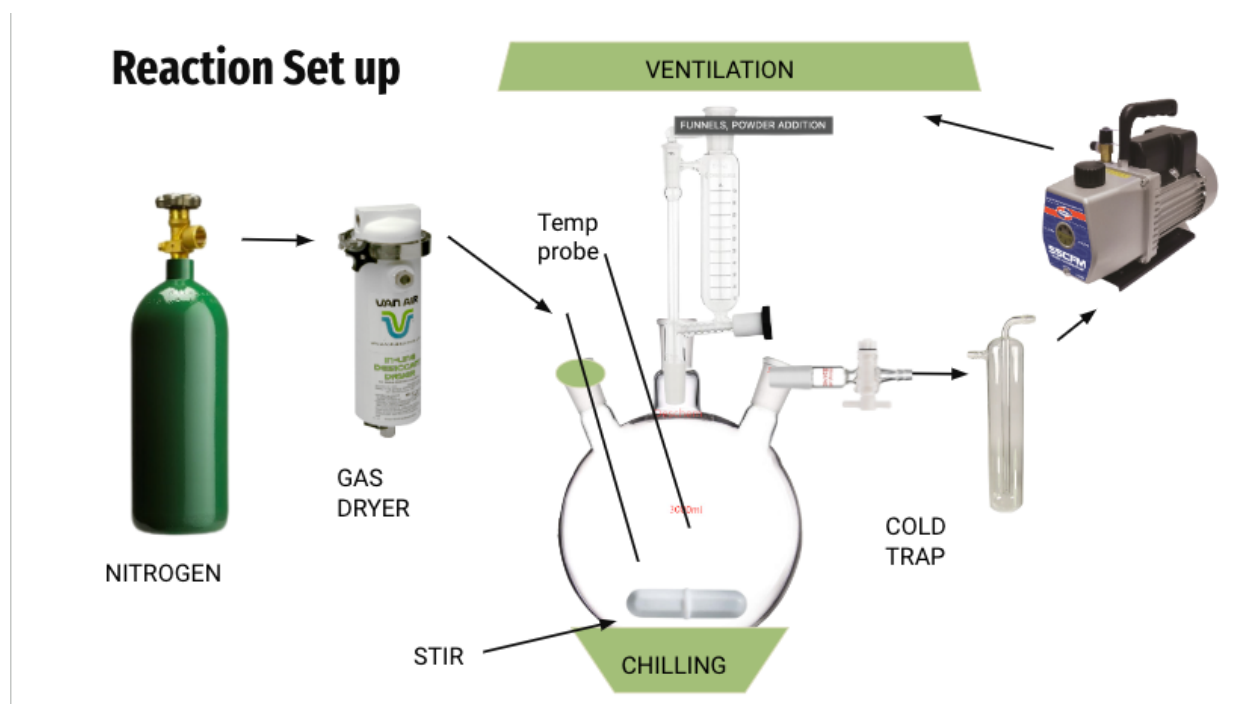


Aluminum Chloride (small scale)

Materials needed:

1. Anhydrous Aluminum Chloride
2. Calcium Chloride
3. Sodium Hydroxide
4. Magnesium Sulfate
5. DCM

Reaction Set Up:



OPERATING PROCEDURE:

1. Dry your CBD isolate to be used for 24 hours in a vacuum oven at 125F
2. Mix your CBD with a 2:1 ratio DCM:CBD
3. Allow this solution to sit in calcium chloride (10%) for 4 hours. Remove calcium chloride.
4. Run a stream of nitrogen through this solution for 6 hours.
5. Add 5% AlCl_3 to be used during the reaction (by weight of CBD) to your addition funnel in a glove box. Transfer over to your reaction apparatus.
6. Add CBD solution to apparatus.

7. Vacuum and backfill your apparatus 3x with nitrogen. Allow nitrogen to bubble through the reaction for the duration of the reaction.
8. Set stir bar to 400 rpms
9. Drop the temperature of reaction incrementally to -5C
10. Add your AlCl_3 slowly. If exothermic spike reaches passed 0C stop addition and await temperature stabilization.
11. Once all AlCl_3 is added wait for 30 minutes.
12. Reaction should be complete.

Quench:

1. Add 15% sodium hydroxide in water at a volume of 1:1 reaction solution: aq lye
2. Keep bubbling nitrogen throughout the duration of the quench
3. Add .5 volumetric liters of distilled water
4. Remove chilling and warm the reaction to room temperature, stirring rapidly the entire time.
5. Add 10% weight of the AlCl_3 used during reaction (magnesium sulfate)

Filtration:

1. Filter through 2.5 micron all of the precipitates created during the quench.

WASHES:

ALL LLE WATER IS USED AT A 1:1 VOLUMETRIC RATIO OF OIL/SOLVENT:WATER

1. Saturated brine wash. Mix vigorously, allow to separate and discharge aqueous
2. Saturated brine wash. Mix vigorously, allow to separate and discharge aqueous
3. 1% Citric acid water. Mix vigorously, allow to separate and discharge aqueous
4. 5% sodium bicarbonate wash. Mix vigorously, allow to separate and discharge aqueous
5. As many distilled water washes until the PH is reading 6.5-7