

Oxidation of Cyclohexanol
Chemistry 233: Organic Lab I

Procedure:

Week 2

1. Obtain from the stock room a packet containing 7.5g NaCl. Add the salt into the distillate collected in last week's experiment. Stir so that the maximum amount of salt will dissolve.
2. Decant the liquid into a separatory funnel. Rinse the Erlenmeyer flask with diethyl ether, and decant the rinsings into the separatory funnel as well. Shake and vent the funnel.
3. Remove the lower aqueous layer from the funnel and discard. Add 10mL 3M NaOH solution into the funnel with the organic layer. Shake and vent the funnel.
4. Remove the lower aqueous layer from the funnel and discard. Add 10mL of saturated salt solution (brine) into the funnel with the organic layer. Shake and vent the funnel.
5. Remove the lower aqueous layer from the funnel and discard. Remove the organic layer from the top of the separatory funnel, pouring the organic liquid into an Erlenmeyer flask.
6. Put a boiling stick (end of a wooden cotton swab) into the Erlenmeyer flask. Using the steam bath, boil the remaining ether off of the cyclohexanone product (heat until it stops bubbling, careful not to let it boil over).
7. Carefully wipe down the sides of the Erlenmeyer flask to remove all condensed water. Using MgSO_4 , dry the liquid product in the Erlenmeyer flask, pipetting the dried product into a pre-weighed container. Weigh the container again to determine the yield of the reaction.
8. Take an IR of your sample to determine purity. Turn in your product in a labeled narrow mouthed bottle. Report the actual yield, % yield, and IR peaks which verify the successful reaction.