Name _____ Chemistry 355

Prelab for the Nitration of Aromatic Compounds using Ytterbium Triflate: A Green Chemistry Experiment

1. Name of and structure of the substrate you are using.

2. Calculate the amount, in grams, of substrate that corresponds to 6 mmoles.

3. Draw the structure of the nitro compound that you expect from this reaction (you don't have to be right)!

4. Why don't we use meta directing groups in this experiment. Why don't they work? One word answer will suffice!!

5. Draw the structure of the nitro products expected (if any) from the following substrates:

   Benzene

   Toluene

   N,N-dimethylaniline.

   Acetophenone