**Alternative Paper `Lab’ Practice with Purification of Acetanilide by Recrystallization**

**Organic Chem 3514 (afternoon lab only) (DUE Wednesday 18 Sept)**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. What is the lab text on page 99 attempting to get you to avoid by saying:

“Do not use too much solvent in an attempt to dissolve resins, mechanical impurities and the like ?”

1. In the initial filtration (and in the subsequent one involving charcoal), your lab instructor strongly urged students to transfer and filter the hot filtrate as fast as possible. He also recommended having some hot water ready. What problem are these steps attempting to prevent ?
2. After the first filtration, you are instructed to add finely divided charcoal black to your slightly purpled colored filtrate. This turns your solution a deep black color, which on first blush seems counterproductive since you want a nice, white product in the end. What role is the charcoal playing ?
3. After the second filtration, which removes the charcoal, the filtrate is cooled in ice. This step is supposed to be the one wherein the soluble impurities are separated from the recrystallizing target product. What assumption must be made for this to work ?

5a) The yields for this lab are historically quite low. There’s a simple reason for it. Re-read page 99

and see if you can see something that was omitted in the actual lab carried out versus what’s written in the manual.

5b) The actual lab practice done in lab substituted a vacuum driven Buchner funnel for the

gravity-flow filter with fluted filter paper recommended in the lab manual. Was this a good idea

or not ..EXPLAIN WHY/WHY NOT.